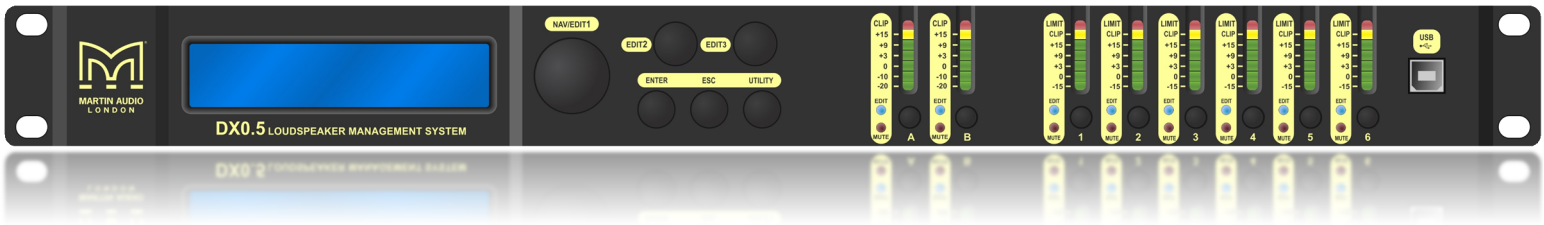
MARTIN AUDIO DX0.5

USER GUIDE



DX0.5 LOUDSPEAKER MANAGEMENT SYSTEM

DX0.5

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Important Safety Instructions

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use this apparatus near water.

6. Clean only with a dry cloth.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type mains plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power lead from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Only use attachments/accessories specified by the manufacturer.

12. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

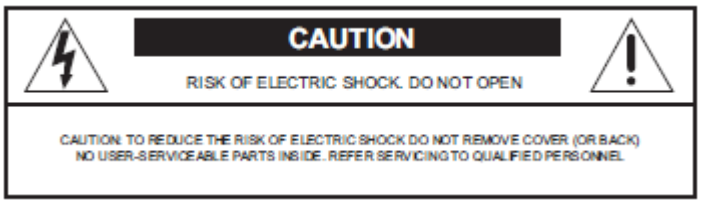
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cable or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15. This apparatus shall not be exposed to dripping or splashing, and no object filled with liquids, such as vases or beer glasses, shall be placed on the apparatus.

16. Do not overload wall outlets and extension leads as this can result in a risk of fire or electric shock.

17. This apparatus has been designed with Class-I construction and must be connected to a mains socket outlet with a protective earthing connection (the third grounding prong).

18. This apparatus has been equipped with a rocker-style AC mains power switch. This switch is located on the rear panel and should remain readily accessible to the user.


CAUTION
RISK OF ELECTRIC SHOCK. DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

19. The MAINS plug or an appliance coupler is used as the disconnect device, so the disconnect device shall remain readily operable.

20. NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Changes or modifications to this device not expressly approved by Martin Audio could void the user's authority to operate the equipment under FCC rules.

21. This apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

ATTENTION — Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant las limites applicables aux appareils numériques de class A/de class B (selon le cas) prescrites dans le réglement sur le brouillage radioélectrique édicté par les ministere des communications du Canada.

22. Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the permissible noise level exposures shown in the following chart. According to OSHA, any exposure in excess of these permissible limits could result in some hearing loss. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels use hearing protectors while the equipment is in operation. Ear plugs or protectors in the ear canals or over the ears must be worn when operating the equipment in order to prevent permanent hearing loss if exposure is in excess of the limits set forth here:

Duration, per day in hours	Sound Level dBA, Slow Response	Typical Example
8	90	Duo in small club
6	92	
4	95	Subway Train
3	97	
2	100	Very loud classical music
1.5	102	
1	105	Chain saw
0.5	110	
0.25 or less	115	Loudest parts at a rock concert

WARNING — To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

Correct Disposal of this product: This symbol indicates that this product should not be disposed of with your household waste, (2002/96/EC) and your national law. This product should be handed over to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, or your household waste disposal service.

Introduction

Offering sophisticated EQ, crossover, dynamics processing and system protection, the Martin Audio DX0.5 Loudspeaker Management System provides complete system optimization for both passive and powered systems. Five different operating modes cover a wide range of systems. Each of the six outputs feature dedicated level control, mute, polarity invert, high / low-pass filters, 7-band parametric / shelving EQ, 600ms delay and limiting. Two input channels provide independent level control, mute, 600ms delay and a flexible 5-band parametric / shelving EQ. The convenient front-panel control also includes 7-segment LED metering per channel. The DX0.5 utilizes high-end 24-bit AKM® AD/DA converters with 120 dB dynamic range for class-leading sound quality. With 24 user-definable presets and flexible I/O for simple routing and configuration, the DX0.5 is an ultra-flexible processor, ideal for a wide range of portable and permanent applications.

Features

- Professional 2-input, 6-output system processor for passive and powered Loudspeaker systems
- Sophisticated, intuitive EQ, crossover, delay and dynamics processing optimizes and protects your system
- High-end 24-bit AKM® AD/DA with 120 dB dynamic range
- Two balanced XLR inputs with level control, mute, 600ms delay and 5-band parametric / shelving EQ
- Six balanced XLR outputs with level control, mute, polarity invert, dedicated high and low pass filters, 7-band parametric / shelving EQ, 600ms delay, and limiting
- Powerful limiter on every output for ultimate protection
- Convenient front-panel controls for parameter editing and input / output muting
- USB port for simple programming via PC
- Linkable inputs and outputs for easy stereo configuration
- 7-segment LED metering for input / output level or limiter activity
- 5 operating modes: 2 x stereo + sub, 3 x stereo, 2 x 2-way + sub, 2 x 3-way and 1 x 6-way
- 24 presets for storing Martin Audio CDD or other system parameters
- Switch mode power supply: 100V – 240V
- Compact, single rack unit design

How to Use This Manual

After this introduction, a getting started guide will help you get things set up fast. The hook-up diagrams show some typical setups, while the remaining sections provide details of the DX0.5 and how to use it to optimize your loudspeaker system.

Getting Started

The following steps will help you set up your system quickly.

1. Make all initial connections with the power switches OFF on all equipment. Make sure the master volume, level, or gain controls are all the way down.
2. Connect the line-level outputs from your mixing console (or other signal source) to the inputs of the DX0.5 Loudspeaker Management System
3. Connect outputs 1-6 from the DX0.5 to the inputs of power amplifiers OR directly to the inputs of Powered loudspeakers and/or subwoofers such as the Martin Audio DD12 or PSX.
4. If using amplifiers, connect the outputs from the power amplifier(s) to the inputs of Passive loudspeakers.
5. Turn on the mixing console (or other signal source).
6. Turn on the DX0.5 Loudspeaker Management System.

7. Select the system setup that best matches your Loudspeaker System [more details may be found on page 17]:

   - 2xStereo+Sub [default]. Two full-range loudspeaker pairs and a pair of [mono by default] subwoofers
   - 2x2Way+Sub Two bi-amp full-range loudspeakers and a pair of [mono by default] subwoofers
   - 2x3Way Two tri-amp full-range loudspeakers or stereo subs with two bi-amp speakers
   - 3xStereo Three full-range loudspeaker pairs
   - 1x6Way Mono control of six full range speaker systems

8. Un-mute the appropriate outputs on the DX0.5. [See page 15 for details.]
9. Turn on the amplifier(s) OR powered loudspeakers. Turn up the volume or gain control(s), in most circumstances gain controls should be turned up to maximum so the amplifier gain matches the level at which limiter thresholds in the DX0.5 have been set.
10. Start the signal source and raise the mixer's main L/R fader(s) up until audio is heard through the loudspeakers.

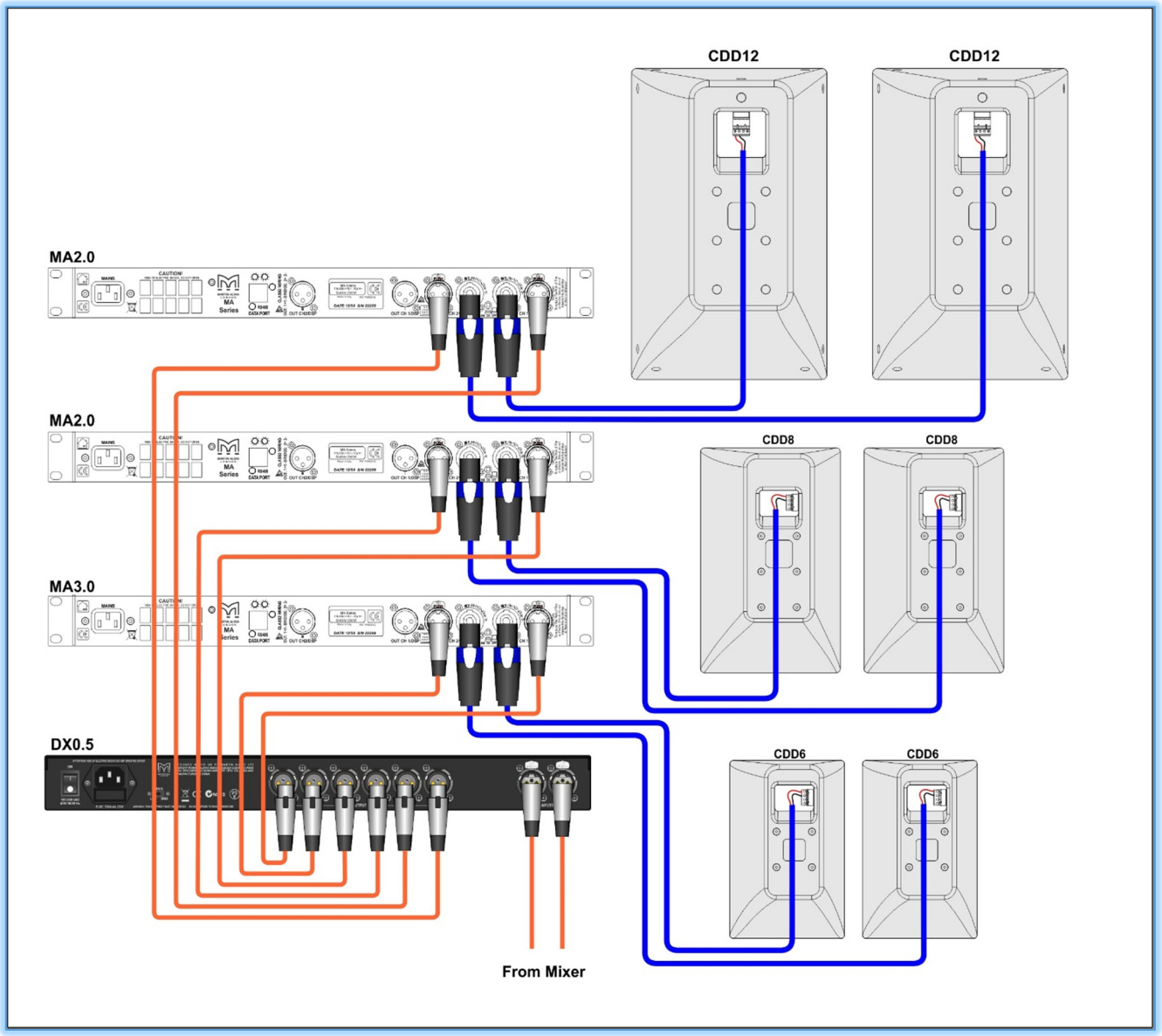
At this point the system is tested and working however we strongly encourage that you read the rest of this owner's manual to learn basic navigation, how to edit the inputs and outputs, set security features and more.

Things to Remember:

- Never listen to loud music for prolonged periods. Please see the Safety Instructions on page 6 for information on hearing protection.
- When you shut down the equipment, turn off the amplifiers first to prevent thumps and other noises generated by any upstream equipment from coming out of the speakers. When powering up, turn on the amplifiers last.
- Save the shipping boxes and packing materials, in the unlikely event of a problem with the DX0.5 these may be required to ship the device to an authorised Service Agent.

Hook-up Diagrams

Passive Full-Range Loudspeakers

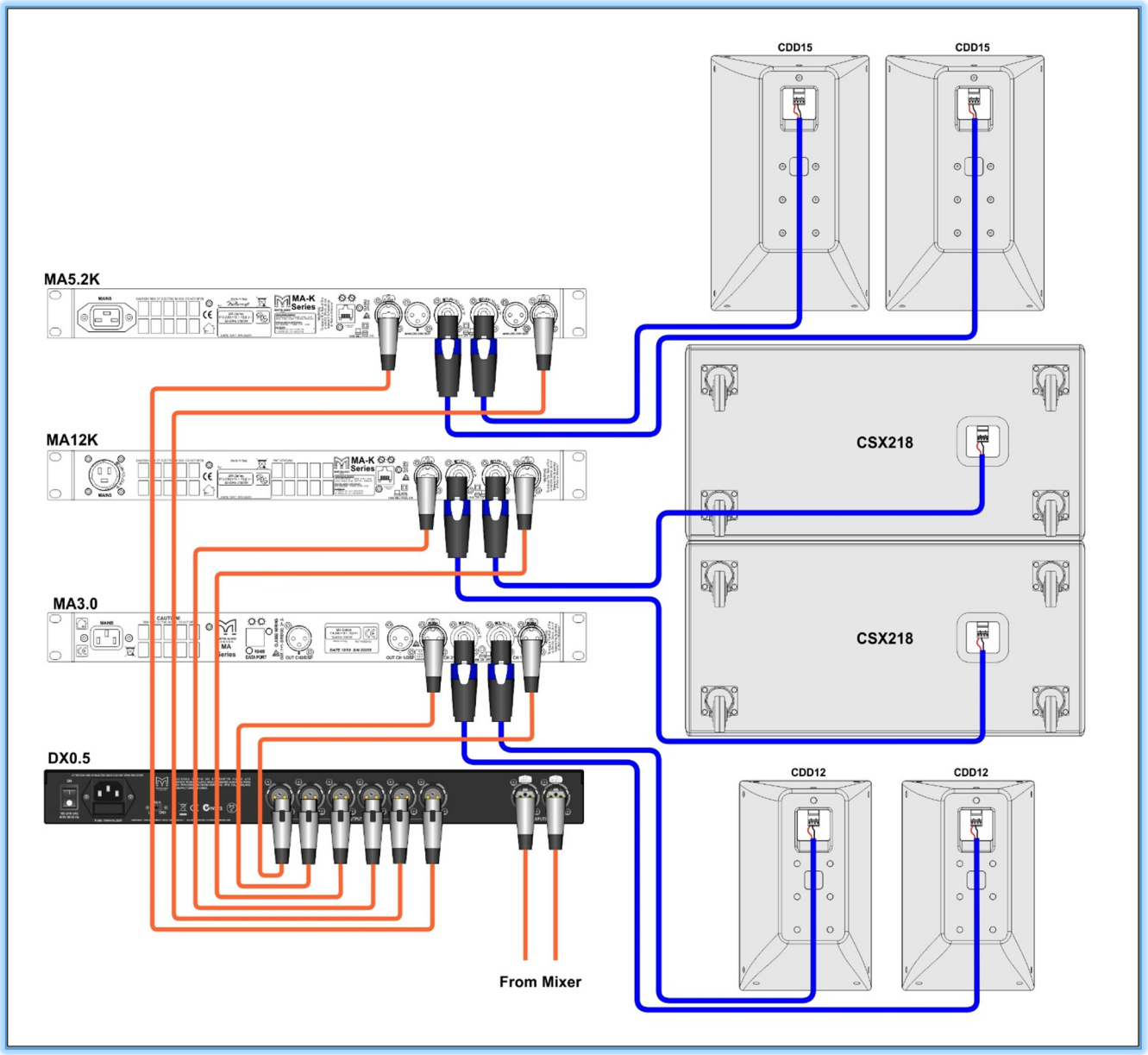


In this example, the DX0.5 is configured using the '3xStereo' setup type. The left and right line-level XLR outputs from a mixer feed the A and B XLR inputs of a DX0.5 Loudspeaker Management system. XLR outputs 1 and 2 of the DX0.5 system feed the 1 and 2 XLR inputs of a Martin Audio MA3.0 Power Amplifier. The CH 1 and CH 2 NL4 speaker outputs of the power amplifier feed the Phoenix inputs of two Martin Audio CDD12 passive loudspeakers located either side of the venue stage.

XLR outputs 3 and 4 of the DX0.5 feed the 1 and 2 XLR inputs of a Martin Audio MA2.0 Power Amplifier. The CH 1 and CH 2 NL4 speaker outputs of this power amplifier feed the Phoenix inputs of two Martin Audio CDD8 passive loudspeakers. These are positioned halfway toward the rear of the venue and have delay added, so they are time aligned with the CDD12s using the output delay available on the DX0.5.

Finally XLR outputs 5 and 6 of the DX0.5 feed the 1 and 2 XLR inputs of another Martin Audio MA2.0 Power Amplifier. The CH 1 and CH 2 NL4 speaker outputs of this power amplifier feed the Phoenix inputs of two Martin Audio CDD6 passive loudspeakers which are located in a separate area away from the coverage of the main system.

Passive Main Loudspeakers with Subwoofers and Delays

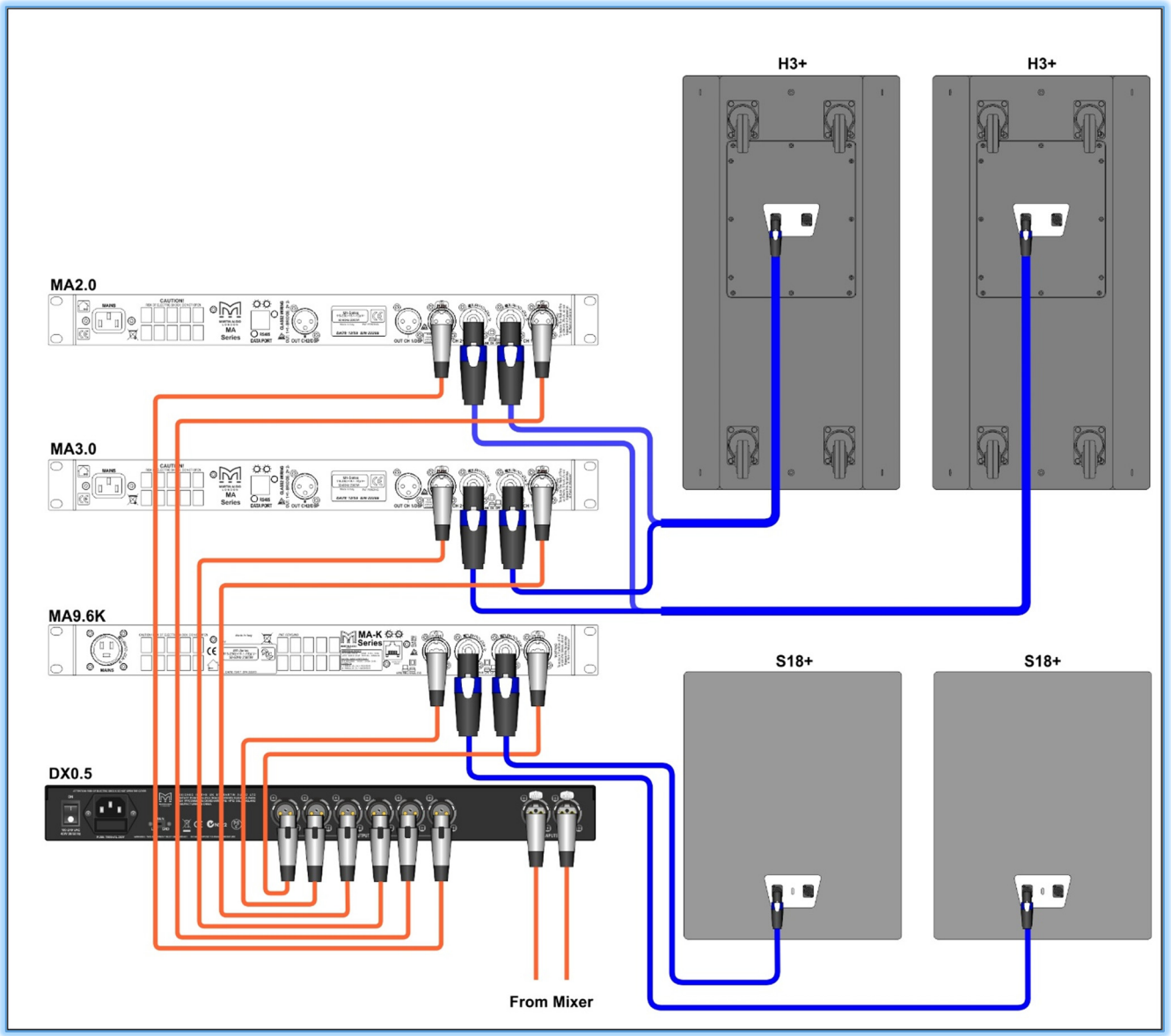


In this example, the DX0.5 is configured using the '2xStereo+Subs' setup type. The example here is how the system for the nightclub section of the CDD launch event was configured. The left and right line-level XLR outputs from a mixer feed the A and B XLR inputs of the DX0.5. XLR outputs 1 and 2 of the DX0.5 feed the 1 and 2 XLR inputs of a Martin Audio MA5.2K Power Amplifier. The CH 1 and CH 2 NL4 speaker outputs of the power amplifier feed the Phoenix inputs of two Martin Audio CDD15 passive loudspeakers. These loudspeakers are positioned to provide the main dance floor coverage.

XLR outputs 3 and 4 of the DX0.5 feed the 1 and 2 XLR inputs of a Martin Audio MA12K Power Amplifier. The CH 1 and CH 2 NL4 speaker outputs of this power amplifier feed the Phoenix inputs of two Martin Audio CSX218 2 x 18" subwoofers. The DX0.5's high- and low-pass filters on output channels 1–4 are configured to create a crossover to optimize these subwoofers with the CDD15s loudspeakers. The subs may be stereo or mono by configuring the input sources for DX0.5 outputs 3 and 4.

XLR outputs 5 and 6 of the DX0.5 feed the 1 and 2 XLR inputs of a Martin Audio MA3.0 Power Amplifier. The CH 1 and CH 2 NL4 speaker outputs of this power amplifier feed the Phoenix inputs of two Martin Audio CDD12 passive loudspeakers. This full-range pair is positioned at the back of the dance floor facing back towards the DJ to ensure complete coverage at the SPL levels demanded by club attendees.

Bi-amped Full-Range Loudspeakers with Subwoofers

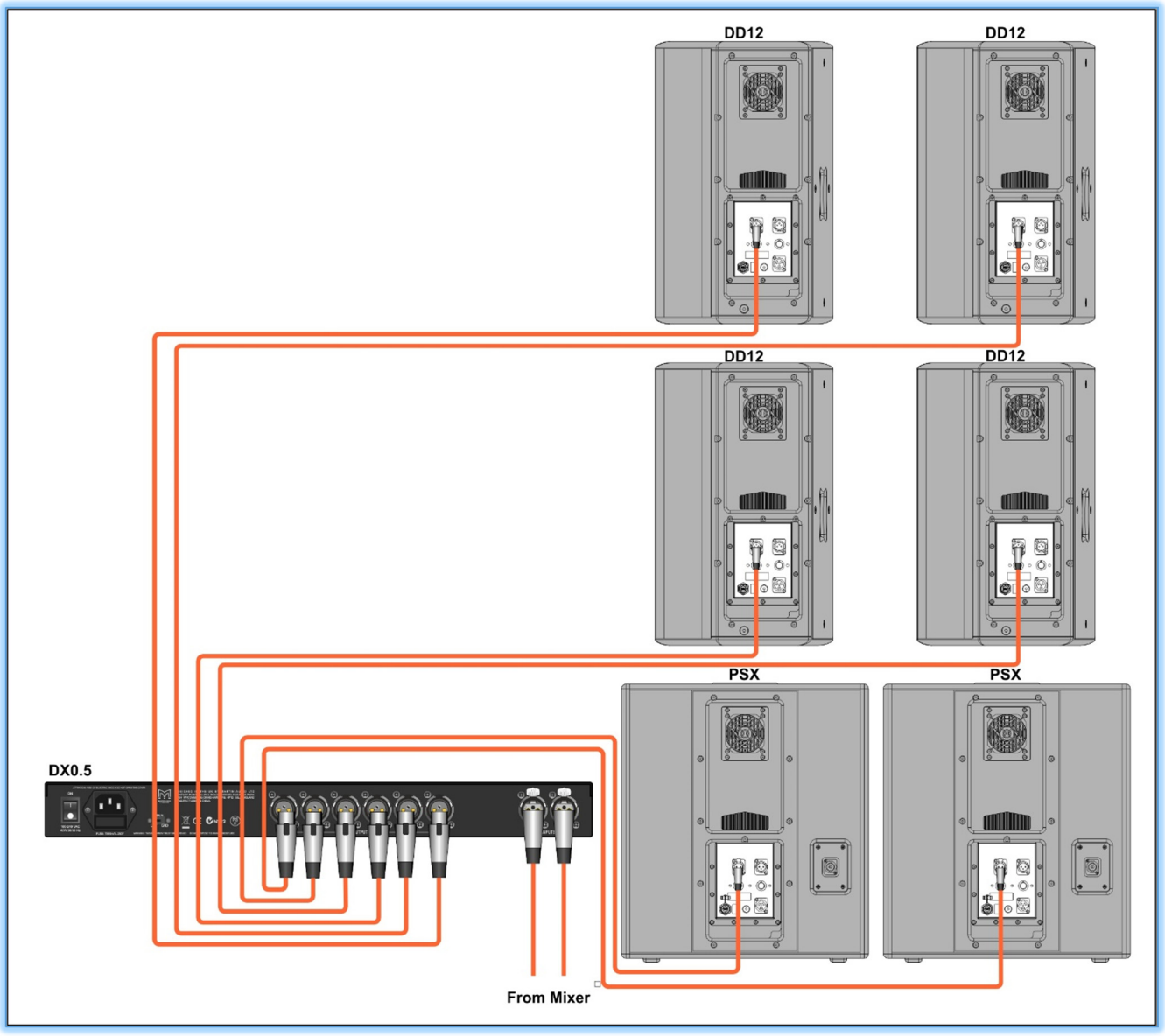


In this example, the DX0.5 is configured using the '2x2Way+Subs' setup type. The left and right line-level outputs from a mixer feed the A and B XLR inputs of a Martin Audio DX0.5 Loudspeaker Management system. XLR outputs 1 and 2 of the DX0.5 feed the 1 and 2 XLR inputs of a Martin Audio MA2.0 Power Amplifier. The CH 1 and CH 2 NL4 speaker outputs of the power amplifier feed the high frequency inputs of two Martin Audio bi-amped Blackline H3+. XLR outputs 3 and 4 of the DX0.5 feed the 1 and 2 XLR inputs of another Martin Audio MA3.0 Power Amplifier. The CH 1 and CH 2 NL4 speaker outputs of this power amplifier feed the low frequency inputs of the H3+. This requires a four-core speaker cable to go to the H3+, at the amplifiers this needs to be split so the low frequency feed on pins 1+/- is fed from the MA3.0 and the mid/high feed on pins 2+/- is fed from the MA2.0.

XLR outputs 5 and 6 of the DX0.5 feed the 1 and 2 XLR inputs of a Martin Audio MA9.6K Power Amplifier. The CH 1 and CH 2 NL4 speaker outputs of this power amplifier feed the NL4 input of S18+ subwoofers.

The DX0.5's high- and low-pass filters on the output channels are configured to create a crossover so that outputs 1 and 2 of the DX0.5 deliver the high frequencies to the loudspeakers, outputs 3 and 4 deliver the low frequencies to the same loudspeakers and outputs 5 and 6 deliver the sub frequencies to the passive subwoofers. The subs may be stereo or mono by properly configuring the input sources for DX0.5 outputs 5 and 6.

Powered Main Loudspeakers and Subwoofers with Separate Stereo Full-Range Loudspeakers



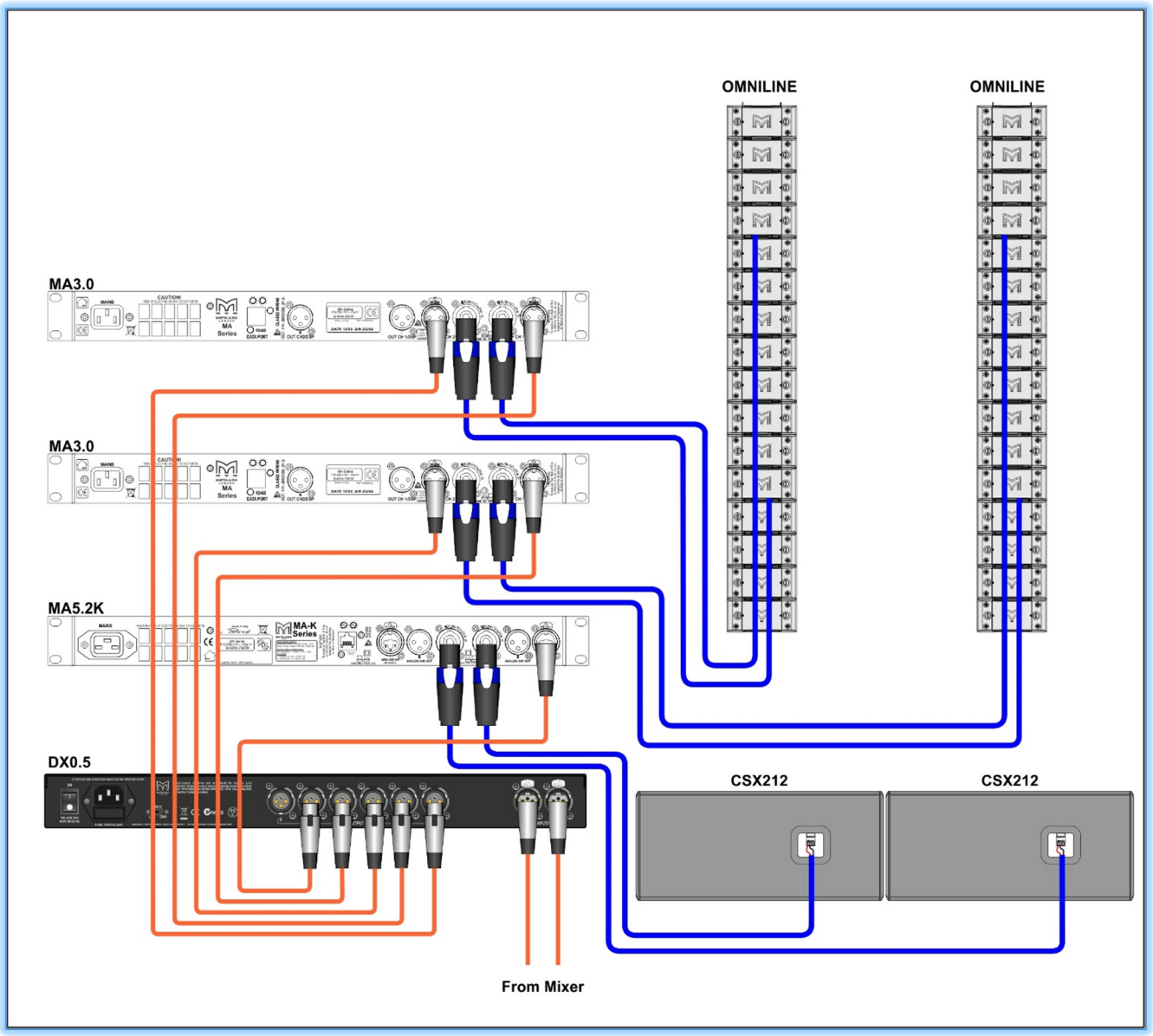
The Martin Audio DX0.5 Loudspeaker Management system is also useful for controlling powered loudspeakers and subwoofers. Here, the DX0.5 is configured using the '2xStereo+Subs' setup type. The left and right line-level XLR outputs from a mixer feed the A and B XLR inputs of the DX0.5. XLR outputs 1 and 2 of the DX0.5 feed the XLR inputs of two Martin Audio DD12 powered loudspeakers. These loudspeakers are located on stage.

XLR outputs 3 and 4 of the DX0.5 feed the XLR inputs of another two Martin Audio DD12s. This full-range pair should be positioned halfway toward the rear of the venue with delay added so they are time-aligned with the main pair.

Finally, XLR outputs 5 and 6 of the DX0.5 feed the XLR inputs of two Martin Audio PSX powered subwoofers that are located on stage and paired with the DD12 loudspeakers. In this setup, the DX0.5's high- and low-pass filters on outputs 1 and 2 and 5 and 6 may be used to configure a crossover between the DD12 and PSX for added control from the processor. Care should be taken when configuring the DX0.5's crossover so the PSX built-in crossover does not conflict. The subs may be stereo or mono by properly configuring the input sources for DX0.5 outputs 5 and 6.

The DX0.5 may be used for additional room corrective EQ and delay to align the loudspeakers and subwoofers and a limiter added for extra protection against over powering from irresponsible DJs for example.

Powered Arrayable Loudspeakers and Subwoofers



Here, the DX0.5 is configured using the '2xStereo+Subs' setup type. The left and right line-level XLR outputs of a mixer feed the A and B XLR inputs of the DX0.5 Loudspeaker Management system.

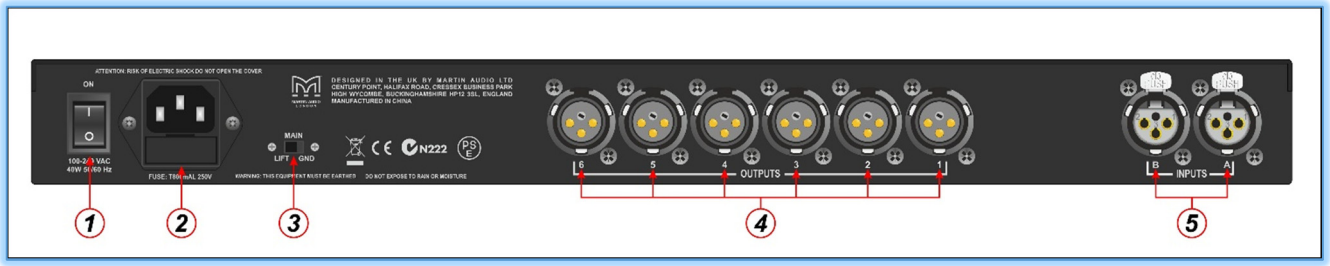
XLR outputs 1, 2, 3 and 4 of the DX0.5 feed the XLR inputs of a pair of MA3.0 amplifiers. The CH 1 and CH 2 NL4 speaker outputs of these power amplifiers feed the Phoenix inputs of the top and bottom of a stereo pair of 16 module Omniline arrays

XLR output 5 of the DX0.5 is connected to the A & B XLR main inputs of a Martin Audio MA5.2K; it is only necessary to connect a cable to input A as the amplifier has a link switch to parallel both inputs. The CH 1 and CH 2 NL4 speaker outputs of this power amplifier feed the Phoenix input of a pair of CSX212 passive subwoofers

The DX0.5's high- and low-pass filters on output channels 1–5 may be configured to create a crossover to optimize the subwoofers with the Omniline. The subs are run mono by properly configuring the input sources for DX0.5 output 5. The DX0.5 may be used for adding the PEQ recommended by the Omniline software and any additional room corrective EQ. Delay to align the loudspeakers and subwoofers can be added and a limiter for protection of the system.

DX0.5 2x6 Loudspeaker Management system Features

Rear Panel



1. Power

Use this rocker-style switch to turn the unit on or off. The processor is on when the top of the switch is pressed in. It is off when the bottom of the switch is pressed in. The LCD Display [6] will illuminate and text will appear when the power switch is on.

The DX0.5 remembers its settings, so you may power cycle the unit and it will resume operation using the same settings as before. The DX0.5 employs relays on the outputs to prevent unwanted pops and noise in the system when power cycling and starting up the processor. After engaging the power switch, the unit will initialize and the relays will switch. Any live outputs will smoothly fade from silence to their configured output levels. The processor may now be edited, or it is ready for use if the DX0.5 is already configured for the loudspeaker system under control.

2. Power Lead Socket and Fuse

This is where to connect the detachable power cable included with the processor. Plug the other end of the power lead into an AC outlet. The outlet should match the power cable.

WARNING: Bypassing the plug's safety ground pin can be dangerous. Don't do it!

The fuse is located behind the fuse cover, at the bottom of the IEC socket. See the "Troubleshooting" section on page 22 for information about replacing the fuse.

3. Main: Lift / Gnd

The ground lift separates the chassis ground from the signal ground. The default position is GND. You may attempt to remedy system ground loop hum by moving the switch to LIFT.

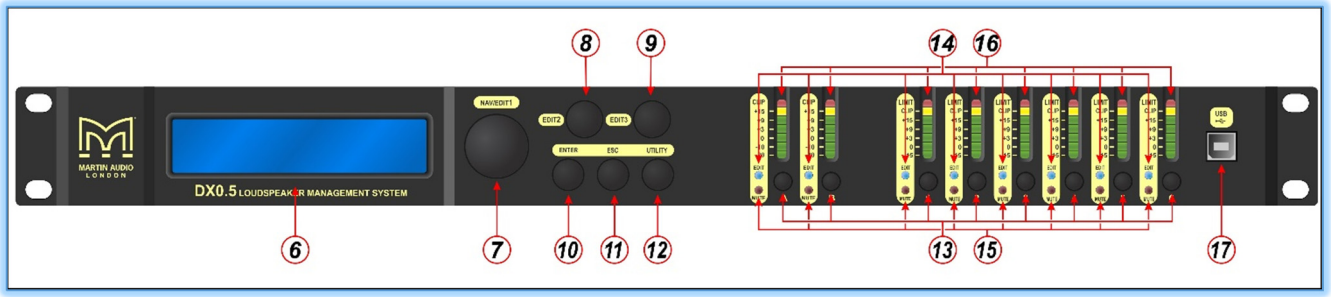
4. XLR Outputs

These six male XLR connectors provide a balanced line-level signal for each of the processor's output channels. Connect these to the inputs of power amplifiers and/or powered loudspeakers.

5. XLR Inputs

These female XLR connectors accept a balanced line-level input from a mixer or other source main L/R output.

Front Panel



6. LCD Display

The LCD Display is one of the most vital features of the processor. It displays processor information including (but not limited to) System, Preset and Security Utilities, gain, delay, EQ and other input and output processing parameters.

When the DX0.5 is powered up, the last state it was in will load up and the LCD Display will present the current system setup type:

- 2xStereo+Sub [default]
- 2x2Way+Sub
- 2x3Way
- 3xStereo
- 1x6Way

7. Nav/Edit1 Control

The Nav/Edit1 rotary encoder control allows you to navigate the user interface, edit sections of the processor, navigate within screens to select sub-menus, pages and parameters, as well as select values during editing.

8. Edit2 Control

The Edit2 rotary encoder control allows you to edit parameters, as well as select values during editing.

9. Edit3 Control

The Edit3 rotary encoder control also allows you to edit parameters, as well as select values during editing.

In general, use the Nav/Edit1 rotary encoder control to scroll through the various pages and configuration settings. Depending on the page, individual parameters may be changed by turning one (or more) of the encoders. In some cases, the Edit2 and Edit3 controls provide fine and course control of the same parameter.

10. Enter Button

The Enter Button allows you to dig deeper and deeper into menus and parameters, confirm operations and change settings.

11. ESC Button

The ESC Button allows you to retreat from selected variables. In some cases, it confirm operations and changes settings, as well. These will be noted.

12. Utility Button

Press this button to select and update the DX0.5's utilities. There are three main utilities menus:

- System Utilities
- Preset Utilities
- Security Utilities

Within each, an array of sub-menus are available.

13. Mute / Edit Buttons

These eight buttons serve a dual purpose:

- Muting selected inputs and outputs
- Editing selected inputs and outputs

To mute an input or output, quickly press and release the desired button once to engage mute; quickly press and release it again to un-mute. Mute as you might expect toggles between muted and unmuted on the corresponding inputs and outputs.

To edit an input or output, press and hold the desired button until that input or output's blue LED [14] illuminates. Press and hold again to take it out of edit mode. Edit allows you to edit – change – variables on the chosen inputs and outputs. While it is not possible to edit the inputs AND outputs simultaneously, it is possible to link and edit the inputs simultaneously OR link and edit any number of outputs simultaneously. Simply press and hold any additional input or output Mute / Edit buttons to link. Any changed parameters will affect all linked inputs or outputs.

14. Edit LEDs

There are a total of eight Edit LEDs on the DX0.5: two input and six output. Edit LEDs illuminate blue when engaged. See Mute / Edit Buttons [13].

15. Mute LEDs

There are a total of eight Mute LEDs on the DX0.5: two input and six output. Mute LEDs illuminate red when engaged. See Mute / Edit Buttons [13].

16. Meters

These seven-segment meters display the input and output signal levels OR the gain reduction amount for each output's limiter, depending on the selected VU Meter mode. Detailed information may be found on page 20 [VU Meter section].

These meters should remain green with the occasional peak into the yellow zone. If the level stays constantly in the yellow section (or any red clipping), lower the level of the source until feeding the DX0.5 until the metering returns to occasional excursions into the yellow. It may also be necessary to check the gain and EQ settings on the DX0.5 input and output channels.

Input meters (starting at the top) show:

Clip, +15 dBu, +9 dBu, +3 dBu, 0 dBu, –10 dBu and –20 dBu.

Output meters (starting at the top) show:

Limit, Clip, +15 dBu, +9 dBu, +3 dBu, 0 dBu and –15 dBu when in Level mode.

If the VU meter mode is Limit, the output meters show:

Limit, 0 dB, –3 dB, –6 dB, –9 dB, –12 dB and –15 dB.

17. USB

The DX0.5 may be controlled and programmed using a Windows-based PC. Go to www.Martin Audio.com/Software to download the free application and driver. Here you will also find presets for other Martin Audio product ranges

Simply connect a USB cable from the DX0.5 to the PC in order to control all parameters of the processor via the DX0.5 Application.

Factory Reset

It is possible to reset the DX0.5 Loudspeaker Management System to its factory settings. Please keep in mind that this erases all settings, including any passwords and presets that may have been set. Be sure to power down any amplifiers and/or powered speakers before resetting the DX0.5.

Simply press and hold the Enter [10], ESC [11] and Utility [12] buttons when powering up until the LCD

Display [6] shows:

Then you may take your fingers off the buttons. You will know it worked when the six output Mute LEDs [15] illuminate after the DX0.5 is fully powered up.

The default password is six zeroes: 000000

Utilities

As mentioned earlier, there are three main utility menus to choose from:

- System Utilities
- Preset Utilities
- Security Utilities

Within each utility menu, an array of sub-menus are available. We will go through each utility, each submenu, how to get there, how to edit and change settings and what each Control and button does in each situation.

When navigating menus, the current setting for any parameter will be indicated with an asterisk [*] making it easy to get back where you started.

Press the Utility Button [12] to open the Utility Menu.

Use the Nav/Edit1 Control [7] to navigate between the three utility menus: System Utilities, Preset Utilities and Security Utilities.

Press the ESC button [11] to return to the main screen.

Press the Enter Button [10] to enter and edit the selected Utilities menu. This is how we reach the sub-menus of the Utilities.

System Utilities

Turn the Nav/Edit1 Control until System Utilities is presented and press the Enter Button [10] to reach the System Utilities sub-menus as listed below:

- System Setup
- Delay Units
- Ramps on changes
- Software Version

Looking at each of these sub-menus individually;-

1. The Nav/Edit1 Control [7] is used to navigate between the four System Utilities.
2. The ESC button [11] is used to return to the System Utilities menu.
3. The Enter Button [10] is used to enter and edit the chosen System Utility.

Press the Enter Button [10] to enter System Setup.

System Setup

System Setup is where the processor is configured for your particular loudspeaker system. It configures channel names, input routing to outputs and provides starting points for crossover setups.

The five options are listed below. Here, turn the Edit2 [8] or Edit3 [9] Control to scroll between the different System Setup choices.

- 2xStereo+Sub [default]

Two full-range loudspeaker pairs and a pair of [mono by default] subwoofers

- 2x2Way+Sub

Two bi-amp full-range loudspeakers and a pair of [mono by default] subwoofers

- 2x3Way

Two tri-amp full-range loudspeakers

- 3xStereo

Three full-range loudspeaker pairs

- 1x6Way

Mono 6-way

Once you have decided on a system, press the Enter Button [10] twice: once to select and again to confirm. The outputs will automatically mute once updated and the processor returns to the System Setup splash screen.

You may configure the DX0.5 for other scenarios by adjusting the available parameters. If you are creating a custom setup, choose the setup that most closely resembles your system, then edit from there.

Press the ESC button [11] to return to the System Utility menu without making any changes.

Delay Units

This is where to choose units used when adjusting the input and output delay values. You will be presented with three options here:

- Unit : Time(ms)
- Unit : Distance(m) [default]
- Unit : Distance(feet)

Turn the Edit2 [8] or Edit3 [9] Control to scroll between these three choices. Press the Enter Button [10] once a unit of delay has been decided. The processor will return to the Delay Units splash screen. Or press the ESC button [11] to return to the System Utility menu without making any changes.

Ramps on changes

When engaged, sudden volume changes may be avoided when changing parameter values, particularly when using a Windows-based PC to control the unit. Disengage this feature for live applications since instant response to change is desired.

Turn the Edit2 [8] or Edit3 [9] Control to scroll between Ramps : On and Ramps : OFF [default]. If changing, press the Enter Button [10] only once here. The processor will return to the Ramps on changes splash screen. Or press the ESC button [11] to return to the System Utility menu without making any changes.

Software Version

Nothing may be edited on this page. Press the Enter Button [10] to view what version of software is installed in this DX0.5. Press the Enter [10] or ESC [11] Button to return to the Software Version splash screen.

Preset Utilities

This is where to save, recall and delete presets on the DX0.5. This is useful when the PA system has multiple setups for different environments or several loudspeaker systems utilizing varying setups.

Note: As mentioned earlier, the DX0.5 will load up the last state it was in when it was powered down.

As mentioned earlier, the way to get here from the main menu is by pressing the Utility Button [12]. Once inside the Utility Menu, scroll the Nav/Edit1 Control [7] clockwise to Preset Utilities. Now press the Enter Button [10] again to reach the sub-menus as listed below:

- Recall a Preset
- Save a Preset
- Delete a Preset

Looking at each of these sub-menus individually;-

1. The Nav/Edit1 Control [7] is used to navigate between the three Preset Utilities.
2. The ESC button [11] is used to return to the Preset Utilities menu.
3. The Enter Button [10] is used to enter and edit the chosen Preset Utility.

Press the Enter Button [10] to enter Recall a Preset.

Recall a Preset

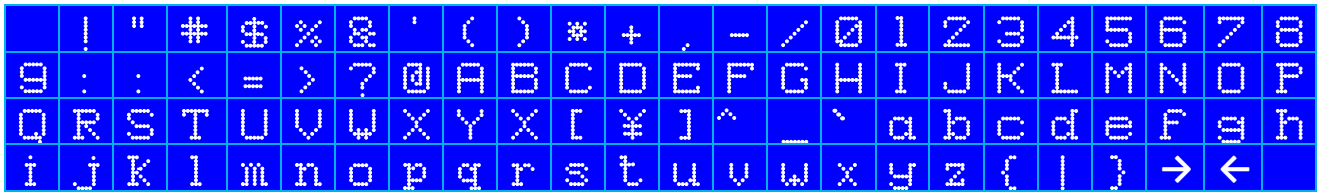
If a preset has been saved earlier, it may be recalled here. If no presets are stored in the unit, the processor will return to the Recall a Preset splash screen.

If presets are available, turn the Edit2 [8] or Edit3 [9] Control to select which preset to recall. Press the Enter Button [10] to select a preset and again to confirm recall. The preset will load and the processor will return to the Recall a Preset splash screen.

Save a Preset

Once your desired system settings have been programmed in, save it to the DX0.5 for recall later. Turn the Edit2 [8] or Edit3 [9] Control to scroll between presets 1 – 24. Press the Enter Button [10] once you decide the location in which you wish to save the preset.

Next you are able to name the preset. The Nav/Edit1 Control [7] moves the cursor left and right while the Edit2 [8] and Edit3 [9] Controls change the text. The text available scrolls through the following characters;-



Once satisfied with the results, press the Enter Button [10] twice: once to select and again to confirm. The processor will return to the Save a Preset splash screen.

It is possible to save over an existing preset. If attempted, you will need to confirm by pressing the Enter Button [10] again. Or press the ESC Button [11] to return to the Preset Utilities menu without overwriting the preset.

Delete a Preset

If a preset is no longer needed for recall, it may be deleted here. It will help to keep the DX0.5's memory clutter-free. Turn the Edit2 [8] or Edit3 [9] Control to scroll between presets 1 – 24. Press the Enter Button [10] once you have selected the preset to delete. Press the Enter Button [10] twice: once to select and again to confirm. The processor will return to the Delete a Preset splash screen.

Security Utilities

This is where to lock the DX0.5 to prevent anyone from accidentally (or intentionally) changing the settings. You also have control over some of the system behaviour after it's been locked.

As discussed earlier, the way to get here from the main menu is by pressing the Utility Button [12]. Once inside the Utility Menu, scroll the Nav/Edit1 Control [7] clockwise to Security Utilities. Now press the Enter Button [10] again to reach the sub-menus as listed below.

- Show Parameter
- Lock Unit
- User Password
- Enable Password

1. The Nav/Edit1 Control [7] is used to navigate between the four Security Utilities.
2. The ESC button [11] is used to return to the Security Utilities menu.
3. The Enter Button [10] is used to enter and edit the chosen Security Utility.

Press the Enter Button [10] to enter Show Parameter.

Show Parameter

Once a DX0.5 has been locked, you have the option of allowing the various processing parameter values to be shown or not. Turn the Edit2 [8] or Edit3 [9] Control to scroll between Parameter will be shown [default] and Parameter will

not be shown. If changing, press the Enter Button [10] only once here. The processor will return to the Show Parameter splash screen.

Lock Unit

Locking a DX0.5 prevents accidental changes to its settings.

Turn the Edit2 [8] or Edit3 [9] Control to scroll between Lock : Off [default] and Lock : On. If changing, press the Enter Button [10] only once here.

When locked, a symbol resembling a key will appear in the lower-right hand area of the LCD Display [6]. Pressing the Utility Button [12] here returns you directly to the Lock Unit splash screen.

When unlocked, the key symbol disappears and the processor will return to the Security Utilities splash screen.

User Password

For the ultimate protection from accidental and intentional parameter adjustments, set up a user password here. Only those with the password will be allowed access to edit processor settings.

The Nav/Edit1 Control [7] moves the cursor left and right while the Edit2 [8] and Edit3 [9] Controls change the text.

In order to change the password, the current password needs to be entered. The default / factory password is: 000000

Enter the current password and press the Enter Button [10]. It will now prompt you for a new password. Use as few as one (and up to a maximum of six) characters, using any combination of letters, numbers and symbols. Enter a new password and press the Enter Button [10]. It will now prompt you to confirm the new password. Enter it and press the Enter Button again to confirm. The processor will return to the User Password splash screen.

If the entered password is wrong, the splash screen will display Password Wrong! and the processor will return to the User Password splash screen without changing the password.

The password has been updated, but it is still disabled. This leads us to the fourth – and final – sub-menu:

Enable Password

Here is where the user password is enabled. The Nav/Edit1 Control [7] moves the cursor left and right while the Edit2 [8] and Edit3 [9] Controls change the text.

Enter the correct password and press the Enter Button [10]. Turn the Edit2 [8] or Edit3 [9] Control to scroll between Password : Disable [default] and Password : Enable. If changing, press the Enter Button [10] only once here.

When enabling, a symbol resembling a padlock will appear in the lower-right area of the LCD Display [6]. Pressing the Utility Button [12] here returns you directly to the User Password splash screen.

When disabling, the padlock symbol disappears and the processor will return to the Security Utilities splash screen.

The password will need to be entered to make any changes once the DX0.5 has been locked and password enabled. Therefore, make a note of the password and keep it somewhere safe. If the password is lost, you will have to perform a factory reset to restore the unit's default settings [see page 13].

Editing

Each input and output has an assortment of powerful parameters used to optimize the loudspeaker system. Changes made in editing mode occur in real time.

To edit an input or output, press and hold the desired Edit Button [13] until that input or outputs blue LED [14] illuminates. Press and hold again to take it out of edit mode.

Inputs A / B:

Engaging Edit on Input A, Input B, or both simultaneously allows you the opportunity to edit the following:

- Gain
- Delay
- EQ Bypass
- 5-Band EQ

1. The Nav/Edit1 Control [7] is used to navigate between Gain, Delay, EQ Bypass and 5-Band EQ. The DX0.5 recalls where you are, so scroll the Nav/Edit1 Control [7] until you see the parameter you want to edit.
2. The ESC button [11] is used to disengage Editing and return to the previous menu.
3. The Enter Button [10] is used to enter and edit the chosen feature.

Press the Enter Button [10] to enter the currently selected input processing parameter. An arrow –> will appear next to whatever setting is ready to be edited: Gain, Delay, EQ Bypass or EQ Bands 1 – 5.

Gain

The input gain allows you to adjust the entire system levels up and down. This is where to compensate for variations in the signal level of the program material from your signal source

Press the Enter button [10] to enter and edit the gain. An arrow -> will appear next to Gain indicating that it is ready to be edited.

Use the Edit2 [8] or Edit3 [9] Controls to change the gain by ±0.1 dB per click. Turning these Controls clockwise increases gain, while turning them anticlockwise decreases gain. The gain ranges from –15.0 dB to +15.0 dB.

Press the ESC button [11] to exit the gain editing mode.

Delay

Setting up input delays on the DX0.5 is useful for time aligning components of a system either to each other or to the live instruments or both.

Press the Enter button [10] to enter and edit the delay. An arrow -> will appear next to Delay indicating that it is ready to be edited.

As stated on page 14, Delay may be represented in one of three ways:

- Time(ms), or
- Distance(m) [default], or
- Distance(feet)

Use the Edit2 Control [8] to change the delay by:

- ±1.000 ms per click, or
- ±0.340 m per click, or
- ±1.115 feet per click

Use the Edit3 Control [9] to make fine adjustments.

The Edit3 Control changes the delay by:

- ±0.0208 ms per click, or
- ±0.007 m per click, or
- ±0.023 feet per click

Turning these Controls clockwise increases the delay time, while turning them anticlockwise decreases the delay time.

The minimum and maximum delay ranges from:

- 0.0000 ms – 600.9984 ms
- 0.000 m – 204.339 m
- 0.000 feet – 670.233 feet

Press the ESC button [11] to disengage Editing.

EQ Bypass

EQ Bypass flattens the 5-Band EQ on the input so you may hear exactly how it is affecting the system. By toggling the EQ Bypass on and off, you may quickly compare the sound with and without EQ.

Turn the Edit2 [8] or Edit3 [9] Control to scroll between Bypass = OFF [default] and Bypass = On.

Press the ESC button [11] to accept the new EQ Bypass mode and exit the EQ Bypass editing mode.

5-Band EQ

Editing input EQ on the DX0.5 is useful for adjusting the response of the entire PA, particularly when correcting anomalies caused by venue acoustics. It is standard practice to use the input EQ for this function leaving the output EQ for any cabinet EQ recommended by the system manufacturer.

Press the Enter button [10] to enter and edit the EQ bands. An arrow -> will appear next to EQ indicating that it is ready to be edited.

Use the Nav/Edit1 [7] Control to change the frequency by ±1/24 octave per click. Turning this control clockwise increases the frequency, while turning it anti-clockwise decreases the frequency. The frequency ranges from 20.0 Hz to 20.0 kHz.

Use the Edit2 [8] Control to change the Q factor (bandwidth) by ±0.05 per click. Turning this Control clockwise increases the Q factor, while turning it anticlockwise decreases the Q. The EQ band may be configured as high or low shelf by turning it all the way anti-clockwise.

These are the EQ choices from the furthest anticlockwise option to the furthest clockwise option:

- –12 High Shelving
- –6 High Shelving
- –12 Low Shelving
- –6 Low Shelving
- 0.05 – 3.00 [Parametric]

To change the EQ between shelving and parametric, the gain must first be set to 0.0 dB.

Use the Edit3 [9] Control to change the gain by ±0.5 dB per click. Turning this control clockwise increases the gain, while turning it anti-clockwise decreases the gain. The gain ranges from –15.0 dB to +15.0 dB.

Press the ESC button [11] to exit the EQ editing mode.

Outputs 1-6:

Engaging Edit on Output(s) 1-6 allows you to edit the following:

- Name
- Source
- Polarity
- Gain

- EQ Bypass
- 7-Band EQ
- Delay
- High Pass Filter
- Low Pass Filter
- Limiter
- VU Meter

1. The Nav/Edit1 Control [7] is used to navigate between Name, Source, Polarity, Gain, EQ Bypass, 7-Band EQ, Delay, High Pass Filter, Low Pass Filter, Limiter and the VU Meter.
2. The ESC button [11] is used to disengage Editing and return to the previous menu.

Press the Enter Button [10] to enter Name. An arrow -> will appear next to Name indicating that it is ready to be edited.

The aforementioned arrow -> will appear next to whatever setting is ready to be edited: Name, Source, Polarity, Gain, EQ Bypass, 7-Band EQ, Delay, High Pass Filter, Low Pass Filter, Limiter and the VU Meter.

Name

Here is where the name of the selected output(s) may be changed. The Nav/Edit1 Control [7] moves the cursor left and right while the Edit2 [8] and Edit3 [9] Controls change the text.

Press the Enter button [10] to accept the new name and return to the Edit menu. Pressing the ESC button leaves the name unchanged and returns you to the output edit menu.

Source

There are three input sources to choose between:

- InA = Input A
- InB = Input B
- InA+InB = A mono sum of Input A + Input B

If you are running a stereo system, choose either Input A or Input B. If the system is mono (or has a mono component such as a subwoofer or a single loudspeaker mounted in a venue's lobby, for example), select the Input A + Input B choice.

Use the Edit2 [8] or Edit3 [9] Control to change between these three options.

Press the ESC button [11] to exit input source editing mode.

Polarity

Polarity inversion is often helpful in improving phase alignment throughout the loudspeaker system, whether used separately or with a small amount of delay. For example, if you have issues with a subwoofer performance, invert the polarity to see if the sub level gets higher or lower.

Turn the Edit2 [8] or Edit3 [9] Control to scroll between Polarity = Normal [default] and Polarity = Invert [180˚].

Press the ESC button [11] to exit polarity edit mode.

Gain

In most cases you may need to adjust the output levels differently to properly balance the system components for ideal performance.

Use the Edit2 [8] or Edit3 [9] Control to change the gain by ±0.1 dB per click. Turning these Controls clockwise increases gain, while turning them anti-clockwise decreases gain. The gain ranges from –12.0 dB to +6.0 dB.

Press the ESC button [11] to exit gain editing mode.

EQ Bypass

EQ Bypass flattens the 7-Band EQ on the output so you may hear exactly how it is affecting the system. By toggling the EQ Bypass on and off, you may quickly compare the sound with and without EQ.

Turn the Edit2 [8] or Edit3 [9] Control to scroll between Bypass = OFF [default] and Bypass = On.

Press the ESC button [11] to accept the new EQ Bypass mode and exit the EQ Bypass editing mode.

7-Band EQ

Output EQ is used primarily for adjusting the response of a particular loudspeaker or transducer. Additionally, output EQ may be used to correct room anomalies in multi-room setups.

Use the Nav/Edit1 [7] Control to change the frequency. Turning this Control clockwise increases the frequency, while turning it anti-clockwise decreases the frequency. The frequency ranges from 20.0 Hz to 20.0 kHz.

Use the Edit2 [8] Control to change the bandwidth by ±0.05 per click. Turning this Control clockwise increases the bandwidth, while turning it anticlockwise decreases the bandwidth. The EQ band may be configured as high or low shelf by turning it all the way anti-clockwise.

These are the EQ choices from the furthest anticlockwise option to the furthest clockwise option:

- –12 High Shelving
- –6 High Shelving
- –12 Low Shelving
- –6 Low Shelving
- 0.05 – 3.00 [Parametric]

To change the EQ between shelving and parametric, the gain must first be set to 0.0 dB.

Use the Edit3 [9] Control to change the gain by ±0.5 dB per click. Turning this Control clockwise increases the gain, while turning it anti-clockwise decreases the gain. The gain ranges from –15.0 dB to +15.0 dB.

Press the ESC button [11] to exit the EQ editing mode.

Delay

Setting up output delays on the DX0.5 is useful for time and phase aligning transducers in bi- and tri-amplified loudspeakers systems, aligning subwoofers to full-range loudspeakers, aligning delay systems to mains on stage, and more.

As stated on page 14, Delay may be presented in one of three ways:

- Time(ms), or
- Distance(m) [default], or
- Distance(feet)

Use the Edit2 Control [8] to change the delay by:

- ±1.000 ms per click, or
- ±0.340 m per click, or
- ±1.115 feet per click

Use the Edit3 Control [9] to change the delay by:

- ±0.0208 ms per click, or
- ±0.007 m per click, or
- ±0.023 feet per click

Turning these Controls clockwise increases the delay time, while turning them anti-clockwise decreases the delay time.

The minimum and maximum delay ranges from:

- 0.0000 ms – 600.9984 ms

- 0.000 m – 204.339 m
- 0.000 feet – 670.233 feet

Press the ESC button [11] to exit delay editing mode.

High Pass Filter

High Pass Filters are utilized to set up crossovers in multi-way loudspeaker and subwoofer systems. They may also be used to roll-off low frequencies that full-range loudspeakers cannot efficiently reproduce.

Use the Edit2 [8] Control to change the frequency. Turning this control clockwise increases the frequency, while turning it anti-clockwise decreases the frequency. The frequency ranges from 20.0 Hz to 20.0 kHz.

Turn the Edit3 [9] Control to see the various filter type and slope options:

- No Cut-Off
- Butterworth 6 dB
- Butterworth 12 dB
- Linkwitz-Riley 12 dB
- Bessel 12 dB
- Butterworth 18 dB
- Butterworth 24 dB
- Linkwitz-Riley 24 dB
- Bessel 24 dB

Press the ESC button [11] to exit this edit mode.

Low Pass Filter

In conjunction with high pass filters, low pass filters are utilized to set up crossovers in multi-way loudspeaker and subwoofer systems. For example, in a 3-way stereo system, use the high and low pass filters on the output feeding the mid-range transducer to define the range of frequencies it will reproduce. Combined with high and low pass filters on the outputs to the low and high frequency transducers, you may divide the frequency spectrum so each transducer is reproducing the range for which it is best suited, making the system sound its best and operate most efficiently.

Use the Edit2 [8] Control to change the frequency. Turning this control clockwise increases the frequency, while turning it anti-clockwise decreases the frequency. The frequency ranges from 20.0 Hz to 20.0 kHz.

Turn the Edit3 [9] Control to see the various filter type and slope options:

- No Cut-Off
- Butterworth 6 dB
- Butterworth 12 dB
- Linkwitz-Riley 12 dB
- Bessel 12 dB
- Butterworth 18 dB
- Butterworth 24 dB
- Linkwitz-Riley 24 dB
- Bessel 24 dB

Press the ESC button [11] to exit this edit mode.

Limiter

Each output has a powerful limiter that may be used to protect loudspeakers from damage due to excessive output levels from the mixer. Limiter parameters are published for all Martin Audio systems on our website and whilst we accept that personal preference may mean that other parameters may be changed from our published figures- EQ changed for personal preference for example- we would strongly recommend that the recommended limiter parameters are always used to maintain reliable operation for many years.

Three Limiter controls may be edited:

- Attack
- Release
- Threshold

Use the Nav/Edit1 Control [7] to change the attack time. Turning this Control clockwise increases the attack time, while turning it anti-clockwise decreases the attack time. The attack time ranges from 5ms to 200ms.

The attack time increment depends on where it is currently set:

- 5 ms – 20 ms: ±1 ms per click
- 20 ms – 30 ms: ±5 ms per click
- 30 ms – 100 ms: ±10 ms per click
- 100 ms – 200 ms: ±20 ms per click

Use the Edit2 Control [8] to change the release time by ±0.1 s per click. Turning this control clockwise increases the release time, while turning it anti-clockwise decreases the release time. The release time ranges from 0.1 s to 3.0 s.

Use the Edit3 Control [9] to change the threshold by ±0.2 dBu per click. Turning this Control clockwise increases the threshold, while turning it anticlockwise decreases the threshold. The threshold ranges from –10.0 dBu to +20.0 dBu. A setting of +20.0 dBu is off.

Press the ESC button [11] to exit limiter editing mode.

VU Meter

You may choose between viewing the signal level or the limiter's gain reduction for each output. These will be displayed on the 7-segment LED meters [16].

Turn the Edit2 [8] or Edit3 [9] Control to scroll between VU-Meter = Level [default] and VU-Meter = Limiter Act. If the latter is selected, the Clip LED on the selected output(s) will illuminate to indicate 0 dB of gain reduction. When the signal level exceeds the limiter threshold, the top Limit LED will illuminate to indicate gain reduction is occurring. Additional LEDs will illuminate for every 3 dB of gain reduction.

Press the ESC button [11] to accept the update and exit VU Meter edit mode.

Linking Inputs or Outputs

It is possible to link multiple inputs or outputs and edit specific parameters simultaneously. This is useful if you want to set the gain on both inputs to +1.0 dB, for example. Or you could introduce a 3 dB cut at 250 Hz on EQ band 3 on output channels 1-4. This saves valuable time rather than having to make the same change on each input or output and of course is more accurate. The changes are absolute, not relative, so if you want different values for the same parameter across other inputs or outputs, you need to make these changes on each input or output. To link, simply press and hold any additional input or output Mute / Edit buttons. Any changed parameters will affect all linked inputs or outputs.

Service Information

If you think your Martin Audio product has a problem, please check out the following troubleshooting tips to confirm the problem. Visit the Support section of our website (www.Martin Audio.com) to contact our technical support team. You may find the answer to the problem without having to return your Martin Audio DX0.5 for servicing.

Troubleshooting

No Power

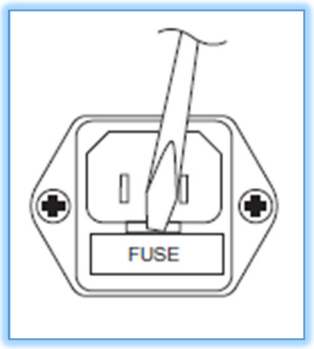
- Is it plugged in?
- Make sure the power cord is securely seated in the IEC socket and plugged all the way into the AC outlet.
- Is anything on the front panel illuminated? If not, make sure the AC outlet is live [check with a tester or lamp].
- Make sure the rear panel power switch is in the ON position.
- Are all the lights out in your local area? If so, contact the local power company to get power restored.
- Is the fuse blown? See the following instructions for removing and replacing it.
- If nothing is illuminated (and you are certain that the AC outlet is live and the fuse is not blown), it will be necessary to have the DX0.5 serviced. There are no user serviceable parts. Refer to Repair on the next page to find out how to proceed.

Noise / Hum

- Try changing the position of the main ground lift switch [3] on the rear panel of the DX0.5.
- Check the signal cables between the mixer and the processor and the processor, amps and loudspeakers. Disconnect them one-by-one. If the noise goes away, you will know which input or output is causing the problem.
- It often helps to plug all the audio equipment into the same AC circuit so they share a common ground.

To remove and replace the fuse:

1. Disconnect the power cord from the IEC socket.
2. Remove the fuse drawer by prying it open with a small screwdriver. It will slide all the way out.



3. Remove the fuse and replace it with an equivalent-type fuse: T 800mAL / 250 V
4. Replace the fuse drawer by pushing it all the way back into the IEC socket.

If two fuses blow in a row, there is a more serious problem. Try a different outlet in a totally different location. If fuses continue to blow, see the Repair section on the next page to find out what to do.

No Sound

- Are the level controls on the mixer or amplifier turned all the way down? Follow the procedures in “Getting Started” section on page 5 to verify that all of the volume controls in the system are properly adjusted.
- Is the signal source working?
- Are all the connections good and sound? Make sure all of the connecting cables are in good repair and securely connected at both ends.

One side is louder than the other

- Are the level controls set the same for both sides on the mixer, amplifier and processor?
- Are the gain settings the same for all left-right pairs of inputs and outputs on the processor?
- Are the EQ settings the same for all left-right pairs of inputs and outputs on the processor?
- Are the limiter settings the same for all left-right pairs of outputs on the processor?
- Check the pan control on the signal source. It may be turned too far to one side. If you're using a stereo signal source, it may be delivering an out-of-balance stereo signal.
- Try switching sides: Turn off the amp, swap the speaker cables at the amp and turn the amp back on. If the same side is still louder, the problem is with your speaker cabling or the loudspeakers. If the other side is louder now, the problem is with the mixer, the amp, or the line-level cabling.

Bad Sound

- Are the input and output connectors plugged completely into the sockets? Make sure they are plugged all the way in.
- Is it loud and distorted? Reduce the signal level at the mixer, amplifier and/or processor.
- If possible, listen to the signal source with headphones plugged into the preamp stage. If it sounds bad there, it's not the fault of the processor.
- Have you gone a tad overboard with the gain and EQ settings? Cut and boost should be used modestly, if extreme amounts of cut and boost are required there is something wrong elsewhere.

Factory Reset:

As a last ditch effort, you can reset the DX0.5 to its factory settings.

Please keep in mind that this erases all settings, including any passwords and presets that may have been set. Be sure to power down any amps and/or powered speakers before resetting the DX0.5.

Simply press and hold the Enter [10], ESC [11] and Utility [12] buttons when powering up until the LCD Display [6] shows:

Please Wait...

Memory Reset

Then you may take your fingers off the buttons. You will know it worked when the six output Mute LEDs [15] illuminate after the DX0.5 is fully powered up.

The default password is six zeroes: 000000

Repair

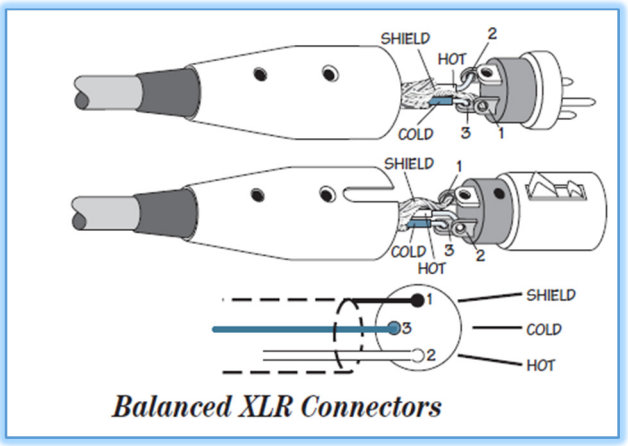
For warranty service, refer to the warranty information on page 28. Non-warranty service for Martin Audio products is available from Martin Audio Distribution Partner of Dealer. To locate your nearest DP or Dealer, visit www.Martin-Audio.com, click “Contact” and select “Worldwide Distributors”

If you do not have access to our website, you can call our Product Support Team on +44 (0)1494 535312, Monday-Friday during normal business hours to explain the problem. Tech Support help to identify whether it is a configuration or other problem rather than a product failure but if the DX0.5 does need to be returned they will help identify the nearest Dealer to your area.

Audio Connections

XLR Connectors

The DX0.5 has two female XLR input jacks that accept balanced line-level signals. When connecting a balanced signal, be sure it's wired per AES (Audio Engineering Society) standards:



Balanced XLR Connectors

XLR

- Pin 1 – Shield (Ground)
- Pin 2 – Hot (+)
- Pin 3 – Cold (–)

You should use high-quality, shielded cable to connect the signal source to the input sockets on the DX0.5.

- High quality microphone cables work well.
- Foil shielded cables are commonly used for audio wiring in installed systems.
- The better the shield, the better the immunity from externally induced noise (like EMI and RFI). Route the cable away from AC power cords and outlets. These are common sources for hum in an audio signal.

Additionally, there are six male XLR output jacks on the DX0.5. These are also wired according to the AES standards listed above.

Control Application

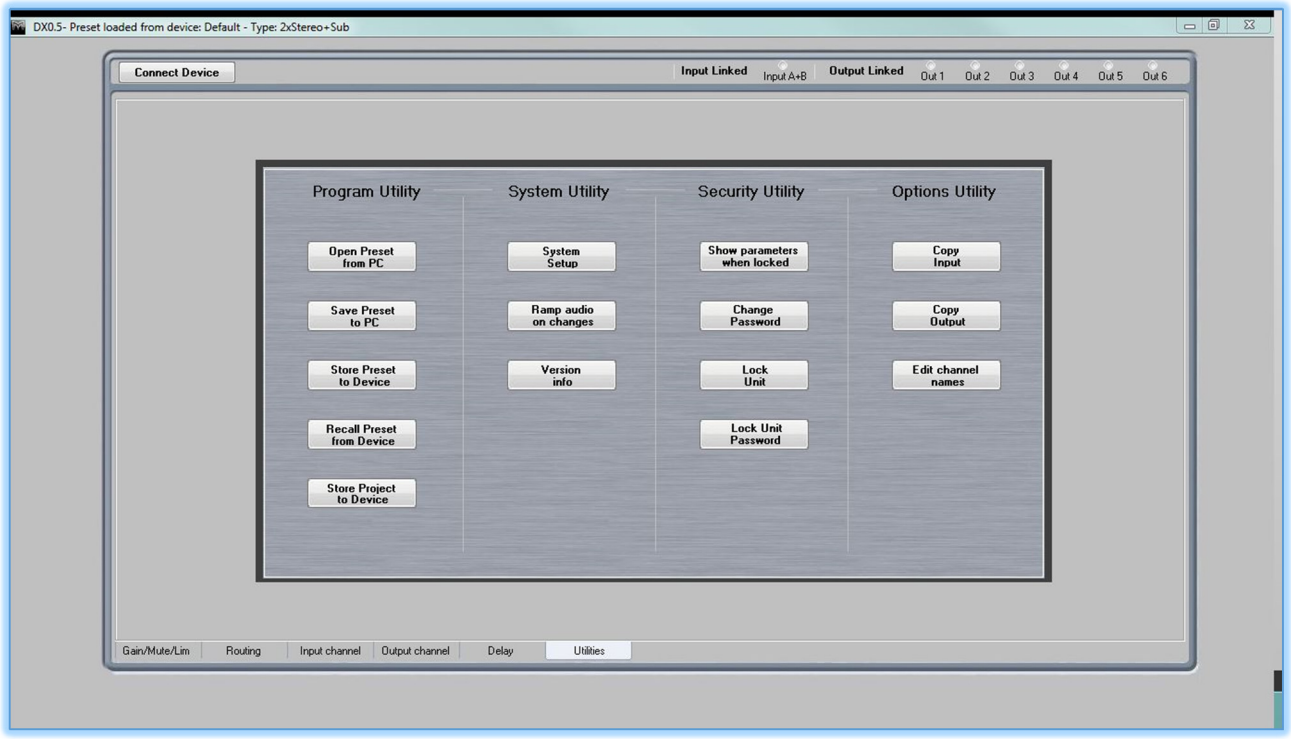
The DX0.5's Control Application provides you with a simple, intuitive means of programming the device using your USB-equipped Windows-based PC. All of the System Setup, Preset, Utilities and Editing functions detailed in this user guide are available via the software, plus a few more which are detailed below.

To get started, simply visit www.Martin Audio.com, navigate "Support" and select "software" from the drop-down menu. Download the driver and software installers and follow the installation instructions.

Once you've successfully installed the driver and software and connected your DX0.5, simply launch the DX0.5 application. The software will auto-detect and connect to the DX0.5, after which you can begin programming in real time. Or if you prefer to work offline, you can configure a system via the software, save your work as a preset, and later connect to the DX0.5 and load your settings into it.

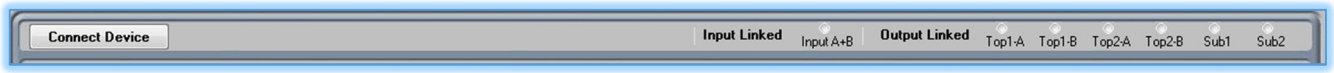
When the DX0.5 is connected and controlled by the software application, all front panel controls on the unit are disabled and the LCD screen indicates that the unit is locked.

Launching the application for the first time will take you to the Utilities screen;-



This window is divided into four sections where you can manage program, system, security and, options. At the bottom of the screen are six tabs that give you one-click access to individual screens showing Gain, Mute and Limiter settings, Routing, Input and output channels and the default Utilities screen. The active tab is shown highlighted.

At the top of the window are key functions that remain visible regardless of which tab is selected;-

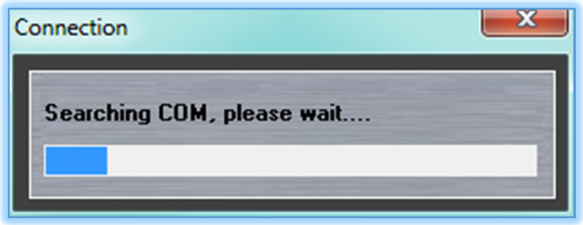


Connect Device

With a DX0.5 connect to your PC with a standard USB cable, click on the Connect Device button;-

It will change to show it is connecting;-

And a window will appear showing that the application is searching the available COM ports for a connected DX0.5;-



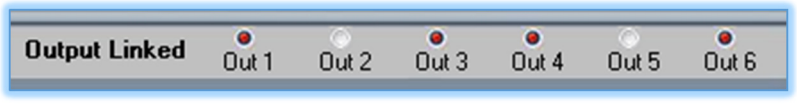
Once connected the button will change to 'Disconnect Device' giving you the option to work off line without closing the application;-

Linking

The top right section shows the linking option for input and output channels;-

Clicking on the input A+B option will change it to a red dot;-

Similarly with the output channels, any of the six can be linked by clicking on the appropriate button;-



With link activated any changes on any of the linked channels will be duplicated on all others that are linked.

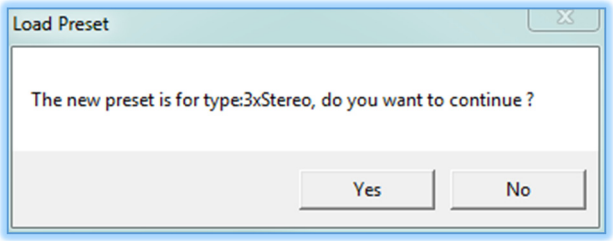
Program Utility

This section manages the saving and recalling of presets between your PC and the DX0.5.

Open Preset from PC

Clicking on this button will highlight it blue;-

A window will open allowing you to navigate to the location on your PC where you have saved preset files which will have a .mdx suffix. Select the file you wish to load and click 'Open' and the preset will be shown in a window for you to confirm the configuration change;-



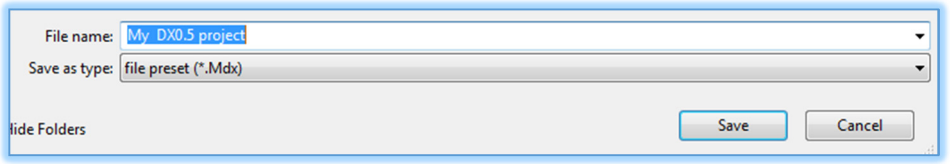
Click 'Yes' if you wish to proceed and the preset will be loaded into the application and directly into the DX0.5 if you are working on line.

DX0.5 Presets for most Martin Audio product ranges can be downloaded from the Martin Audio website, go to www.martin-audio.com click on 'Support' and select 'Software' from the drop-down menu.

Save Preset to PC

This gives you the option to save a system configuration you have created as a .mdx file on your PC so it can be recalled in future or even shared with other DX0.5 owners. Once you are happy with all the settings in your project, select 'Save Preset to PC;-

A window will open allowing you to navigate to a suitable location to store your file. You can add a file name of your choice then click 'Save' to store the file for future use;-

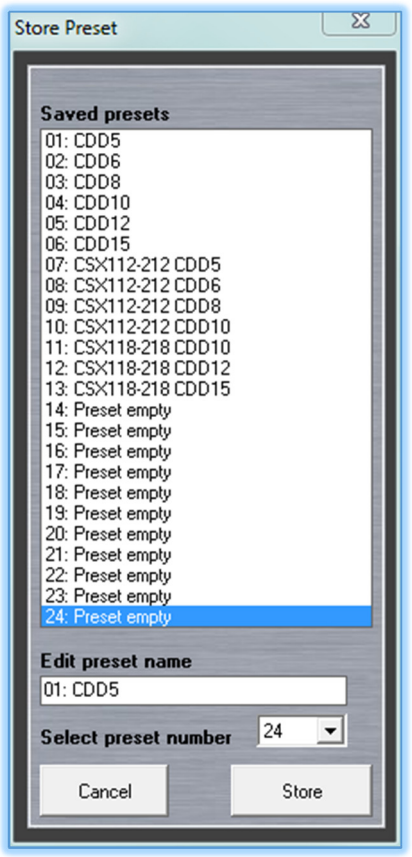


Store Preset to Device

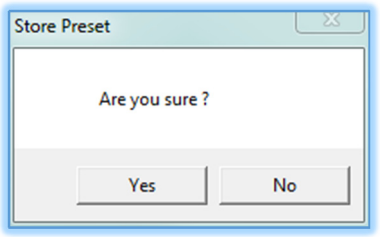
The DX0.5 has 24 Preset locations into which your choice of presets can be stored. As supplied the first 13 locations will have CDD presets and you can chose to store new configurations to any of the eleven empty locations, or over-write the CDD presets. Note that you can easily download the CDD presets from the Martin Audio website if they have been over-written and you wish to restore the factory settings.

Once you have defined all the parameters in your project click on 'Store Preset to Device';-

A window will open showing all 24 preset locations;-



You can select the desired preset location into which you wish to store your file either by clicking on the preset in the main part of the window, or by clicking on 'Select preset number' and choosing the desired location from the drop-down list. In the 'Edit preset name' section you can give you preset a name of your choice up to 16 characters. If you are over-writing an existing preset and want to keep the same name you can double click on it in the preset list and the name will be transferred to the Edit preset name section. Once you are happy with the preset location and name click 'Store' and a window will appear asking you to confirm;-

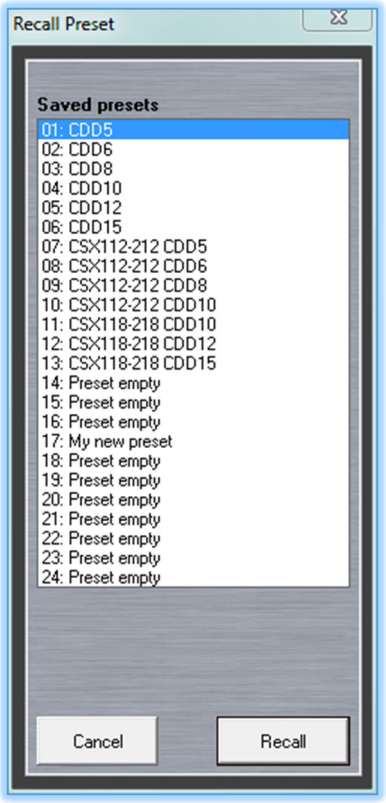


If you are happy to proceed click 'Yes' and the preset will be stored in the designated location.

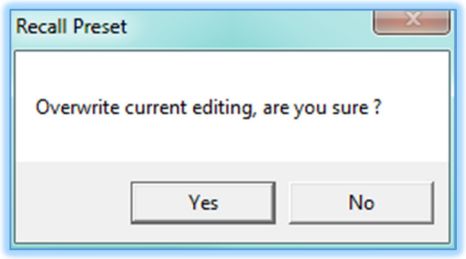
Recall Preset from Device

With the factory defaults or new presets stored in the DX0.5 this button is used to recall the one you wish to use for a given application. To recall a preset, click on the Recall Preset… button;-

A window similar to the Store Preset window will open;-



Simply click on the preset you wish to load and click 'Recall'. You will see a confirmation pop-up;-



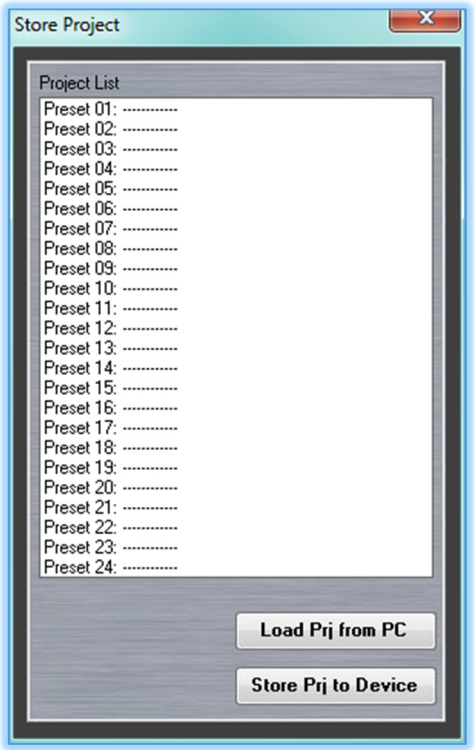
Click 'Yes' to proceed, the selected preset will be loaded. If off line this will be almost instantaneous, if connected to a DX0.5 you will see a progress bar at the top of the window which will take a few seconds to travel from left to right as the preset is loaded.

Store Project to Device

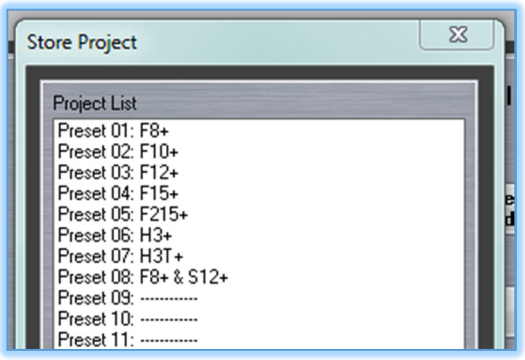
The DX0.5 also offers the option to upload an entire project which will populate all 24 memories simultaneously. Project files are available from the Martin Audio website and are grouped by product range so your DX0.5 can be fully loaded with presets for a specific range of speaker systems, Blackline+ for example.

To load a project click on the Store Project to Device button;-

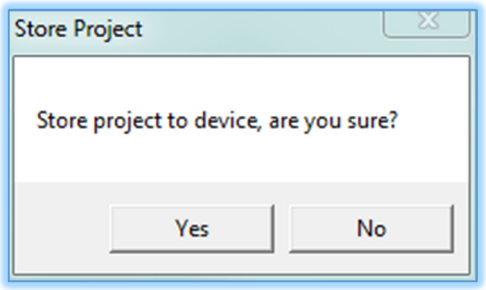
The following Window will appear;-



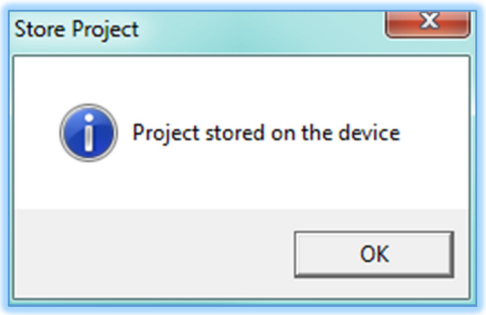
Click the 'Load Prj from PC' button and navigate to the file location on your PC where you have downloaded a Project file from the Martin Audio website, DX0.5 Project files have a prj file extension. This will populate the window with the Presets contained within the Project;-



Next Click on 'Store Prj to Device' and a confirmation Window will appear;-



Click 'Yes' to confirm and upload all presets to the DX0.5. You will see a confirmation window;-



All Presets are now stored into the internal memories and can be recalled as required.

System Utility

System Setup

This button opens a window in which the system architecture can be configured;-

The options are;-

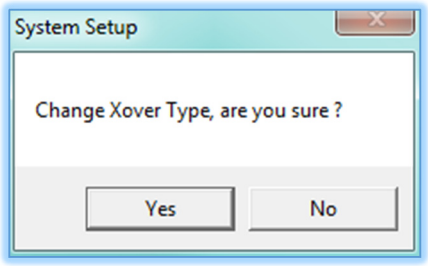
2xStereo+Sub, a twin stereo system with mono sub feeds, suitable for a stereo system with a pair of passive mid top cabinets each side with additional subs which are few from a mono sub of the stereo input.

2x2Way+Sub is a stereo system using bi-amp cabinets for mid-top also with mono sub outputs.

2x3Way is a stereo system with either tri-amped speakers each side or possibly bi-amp mid top cabinets with independent subs also run in stereo.

1x6Way is a mono system with six independent full range outputs. Inputs A and B can be used and a mono signal is derived from both of them.

When you have selected your desired configuration, click on the 'Confirm' button. You will see a pop-up window;-



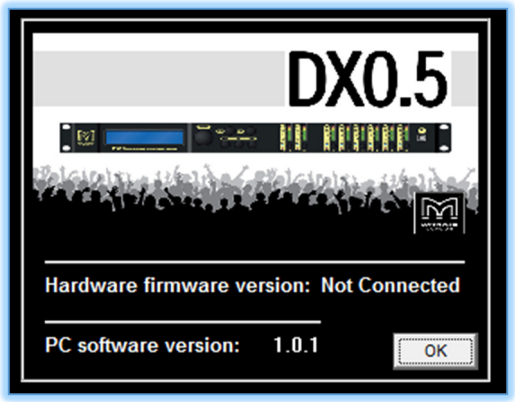
If you are happy to proceed select 'Yes' and the system routing will change accordingly.

Ramp Audio on changes

This feature when enabled prevents sudden changes in the audio which could be undesirable if adjustments are being made with audio passed through the processor. Regardless of how big a change is made to a parameter such as gain the level will ramp slowly from the previous setting to the new so there is no sudden jump in volume. This would usually only be necessary during programming as in the majority of cases changes that are selected in a live environment will need to change as quickly as possible

Version info

This button brings up a Window with the DX0.5 software version details;

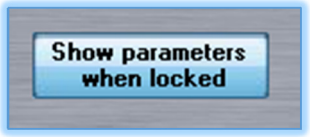


Click 'OK' to close the window

Security Utility

This section features a number of facilities to protect the DX0.5 from unauthorised operation, particularly when used with an installed system.

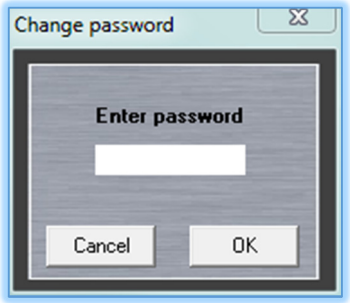
Show parameters when locked



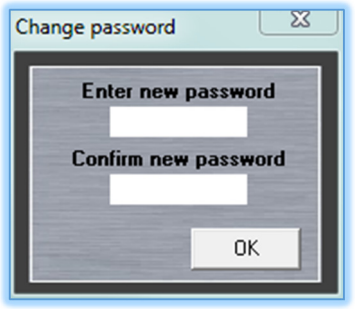
This feature when enabled allows a user to navigate through all settings when a DX0.5 is locked to see the values et cetera but without allowing any changes to be made. For complete lock-out leave this un-checked which will prevent even looking through the parameters.

Change Password

This allows the user to change the stored password for a new one. Click on the button and the following window appears;-



Type the correct password, the default for a new DX0.5 is 000000. You will see the following window;-



You can now enter a password of your choice which can be from 1 to six digits. Re-enter the new password to confirm and click 'OK' and your password is now stored.

Lock Unit

With lock Unit activated no parameters can be adjusted or viewed unless the Show parameters when locked feature has been enabled. This applies to the software application and to the DX0.5 once disconnected from your PC. It can be unlocked with a second click on the Lock Unit button.

Lock Unit Password

This function operates in the same way as Lock unit only requiring your security password to be entered to lock and unlock the DX0.5 for additional security. Click on the button and a window will pop-up requesting your password;-

Enter the password, either your own if you have changed the password to one of your choice via the Change Password feature, or the default which is 000000. The Unit is now locked both to changes in the software and to the DX0.5 itself once disconnected from your PC. To unlock, click the button a second time and the same Password window appears. Re-enter your password and the DX0.5 is unlocked.

Options Utility

This section features functions for the configuration of the input and output channels.

Copy Input

This allows you to copy all parameters from channel A to B or B to A. A click on the button brings up the following window;-

Select which input either A or B is the source from which you wish to copy the parameters, then select the destination input whichever is not the same as the source. Click 'Confirm and all parameters will be copied across match both inputs. Note that you can use the Link function to keep both inputs completely matched in real time whichever parameters are adjusted.

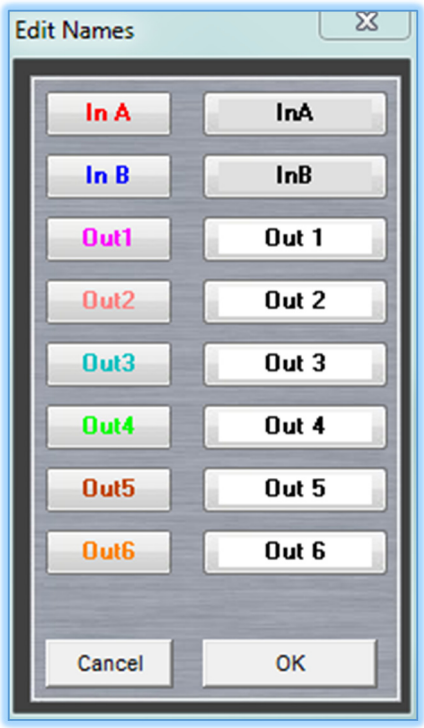
Copy Output

Copy output works in exactly the same way as copy input with the difference that there are six outputs from which to select your source and destination channels. Clicking the 'Copy Output' button opens the following window;-

Operation is the same as copying inputs; click in the Output Source drop-down to select which of the six output channels you would like to copy then click on the Destination drop-down to select which output you would like to copy the parameters to. Click 'Confirm' and all parameters are copied across. Note that as with inputs, any outputs can be linked together to keep all parameters matched.

Edit Channel names

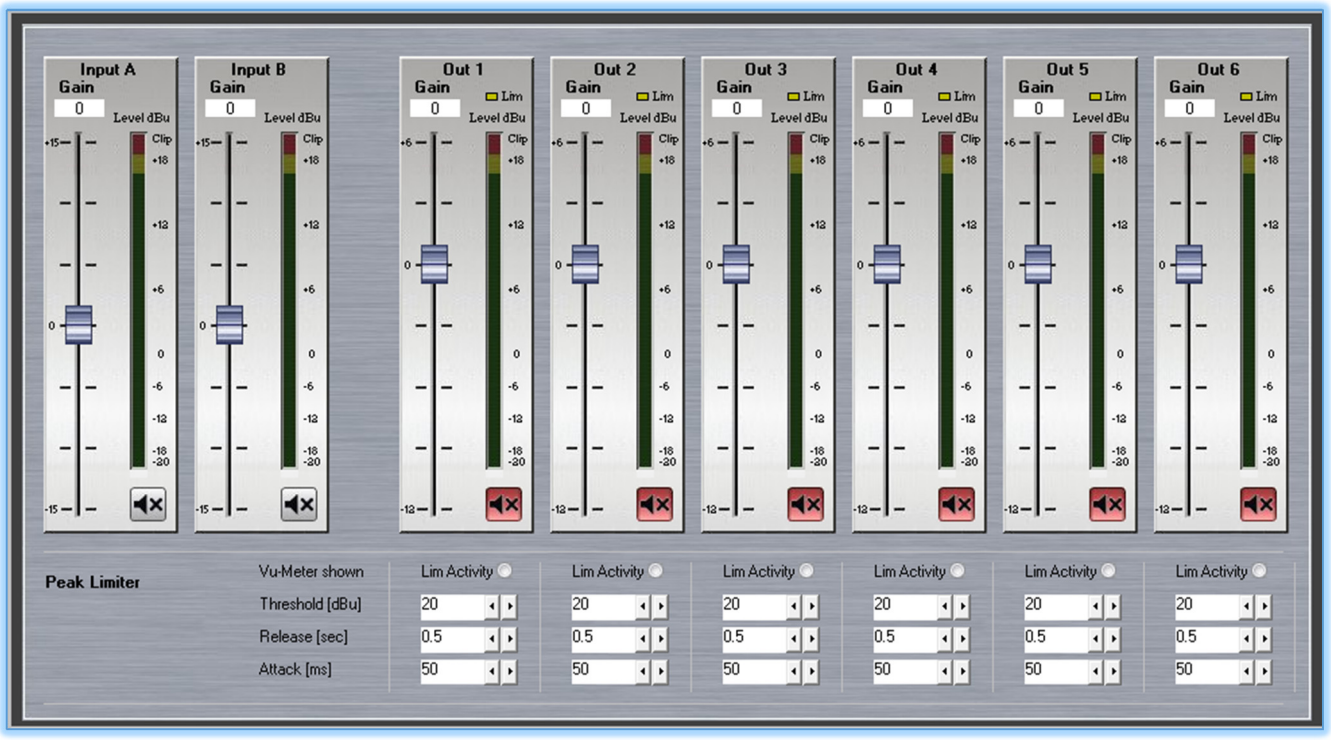
This option allows you to change the default output channel names to something suited to your application. Click on the button to bring up the name editing window;-



Click on any of the output names in the column on the right and type a new name which can be up to six characters in length.

Gain/Mute/Lim

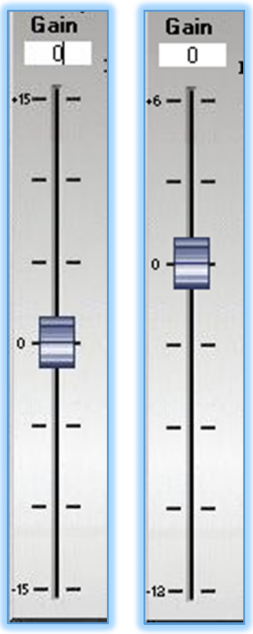
The first and possibly most important tab is the Gain, mute and limiter page;-



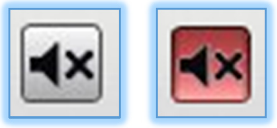
From this page you can view the input and output levels, adjust gain, mute channels and set limiter parameters.

Gain

Gain is adjustable for both inputs and all six outputs using either the gain fader which can be dragged and dropped to any value required or alternatively specific values can be typed into the Gain value window. Input gain can be adjusted from -15 to +15dB. Output gain from -12dB to +6dB. The faders default to the zero position therefore are in a slightly different vertical position due to the different scales. Here are input and output fader for comparison;-

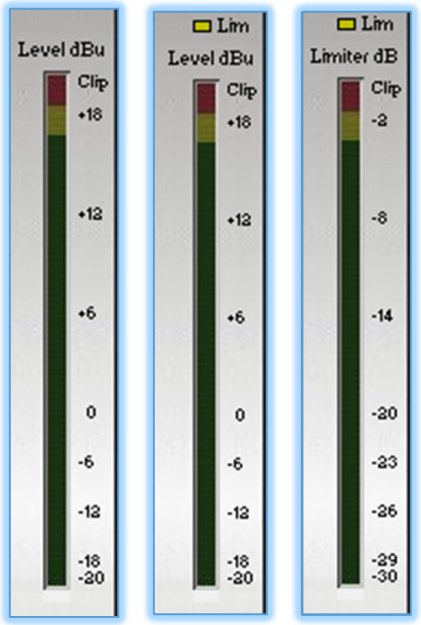


Mute is available on all input and output channels via the Mute button just to the right of the fader and below the VU meter. In normal, un-muted mode the button is grey, when activated the channel is muted and the button turns red. Here are both un-muted and muted versions;-



Metering

Both input and output channels feature multi-segment bargraph-style VU Meters which have a scale from -20dBu to +18dBu with a clip segment right at the top. The output meters also feature a limit light above the bargraph to indicate limiter operation. In addition there is an option in the Limiter section change the output VU Meter function to indicate limiter activity. This changes the scale to read from -30 to -2 dB. Here are input and output VU meters plus and output meter configured to show limiter activity;-



Limiters

Limiters are available to protect the speaker system connected to each output;-

These have fully adjustable controls for the Threshold; the level in dBu at which the limiter will activate. This can be adjusted from -10 to 20dBu. 20dBu is the default which is essentially out of circuit. Values can be adjusted up and down using the two arrowed buttons or specific values typed directly into the window. **Note that for the DX0.5 to accept typed values you MUST press 'Enter' after typing the value. Failure to do this will result in the value reverting to its previous setting**

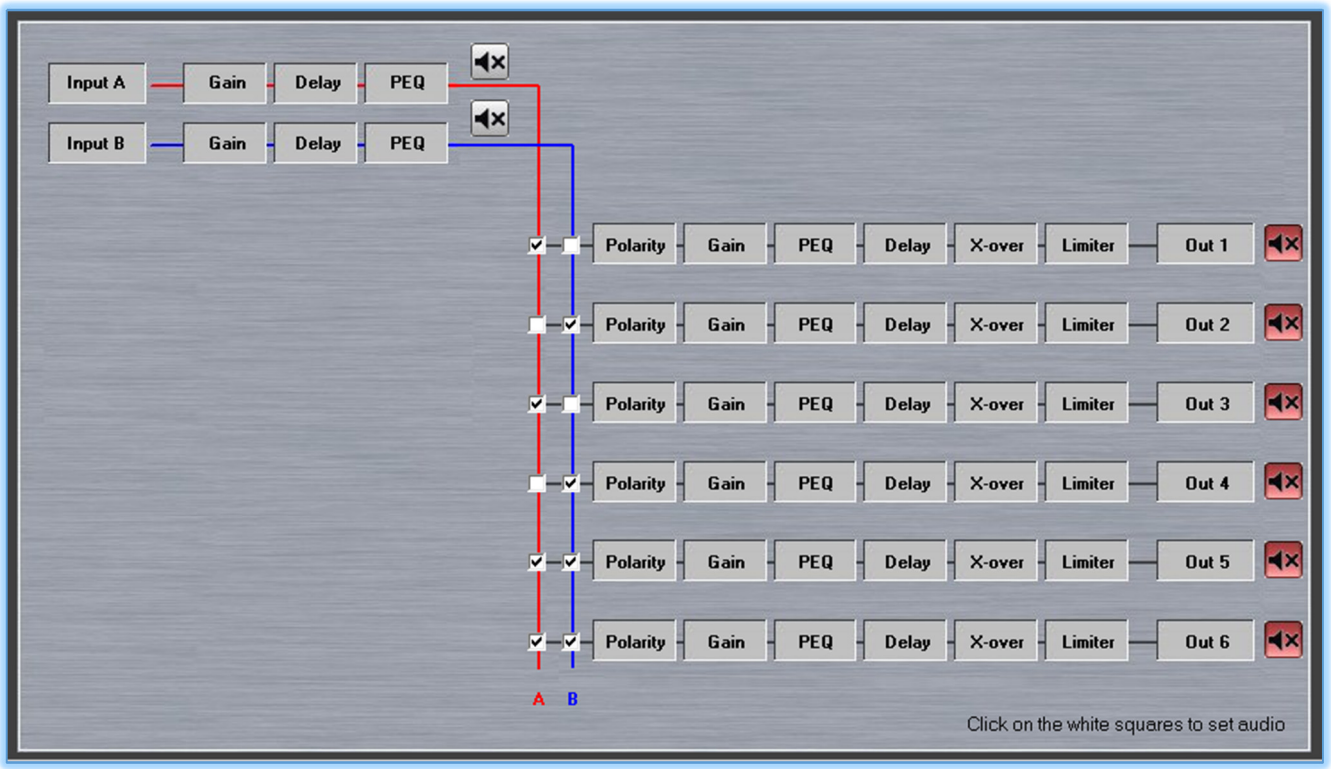
Attack time is the time in milliseconds before which the limiter will operate; a shorter time acts like a clip limiter stopping virtually all signals from exceeding the threshold level, a slower time will allow short-term peaks to pass through whilst still restricting the

long term power keeping it to within levels at which the drivers will avoid damage. As with threshold the values can be cycled up and down using the arrowed buttons or values can be entered by directly typing them into the window followed by the Enter key. Values can range from 5ms up to 200. Steps are 1ms from 5 to 20ms, 5ms from 20 to 30ms, 10ms from 30 to 100ms then 20ms from 100 to 200.

Release is the time in seconds that it takes the gain to return to normal after levels drop back below the limiter threshold. A slower release helps to make the limiter less audible reducing the "pumping" sound that is often audible. As with threshold and attack the values can be cycled up and down using the arrowed buttons or values can be entered by directly typing them into the window followed by the Enter key. Values can range from 0.1s up to 3s in steps of 0.1seconds.

Routing

The routing tab allows you to configure the routing from the two input channels to the six output;-



This page also allows quick access to the pages for other adjustments;-

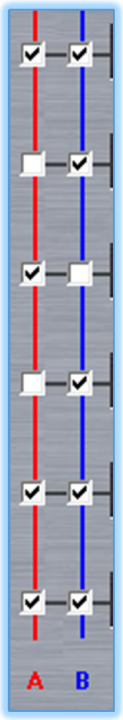
Clicking on any other the input or output boxes will bring up the output naming window.

Clicking on any of the Gain or Limiter boxes will open the Gain/Mute/Lim tab.

Clicking on a Polarity or Delay box will take you to the Delay Tab.

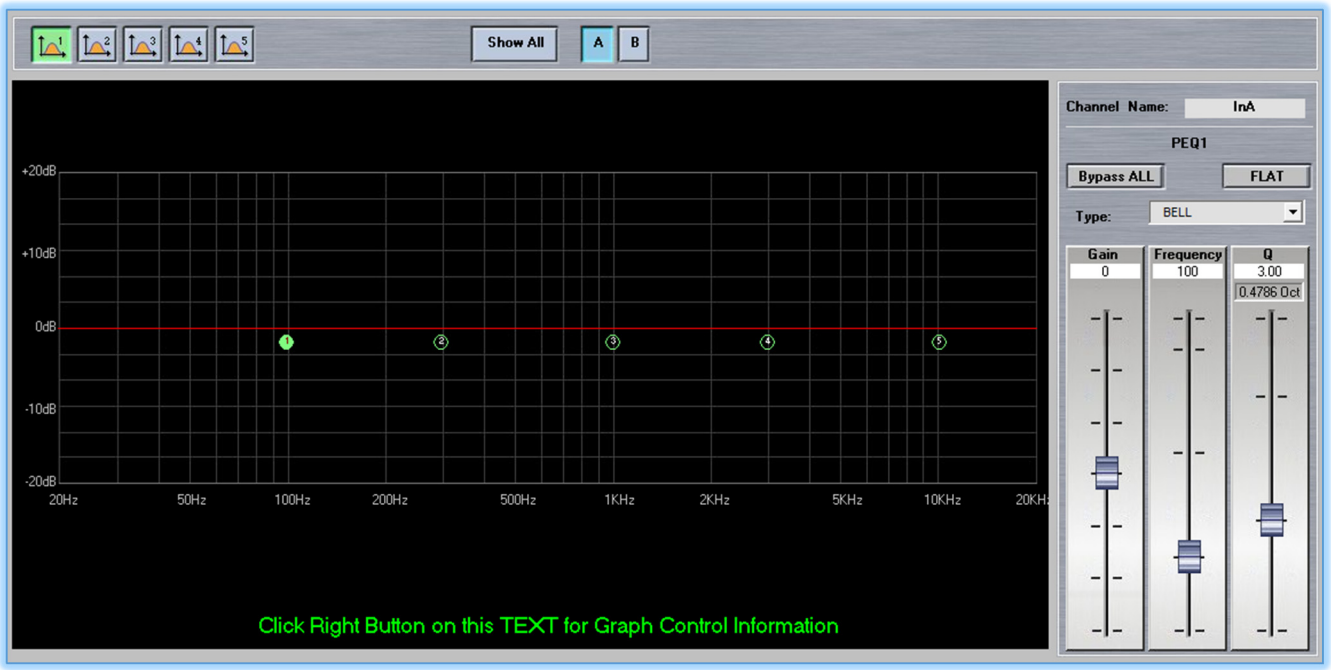
Clicking on PEQ or X-over will open the input or output channel tab depending on which box is clicked.

The routing from inputs A and B will be pre-determined by your choice of system configuration but can be freely modified to suit your requirements by simply clicking on the nodes to show a tick. Not that all outputs must have at least one input routed, they cannot be left un-routed (but can of course be muted if you don't need to use a channel). Both nodes can be clicked to run the output channel from a mono signal derived from both input channels;-

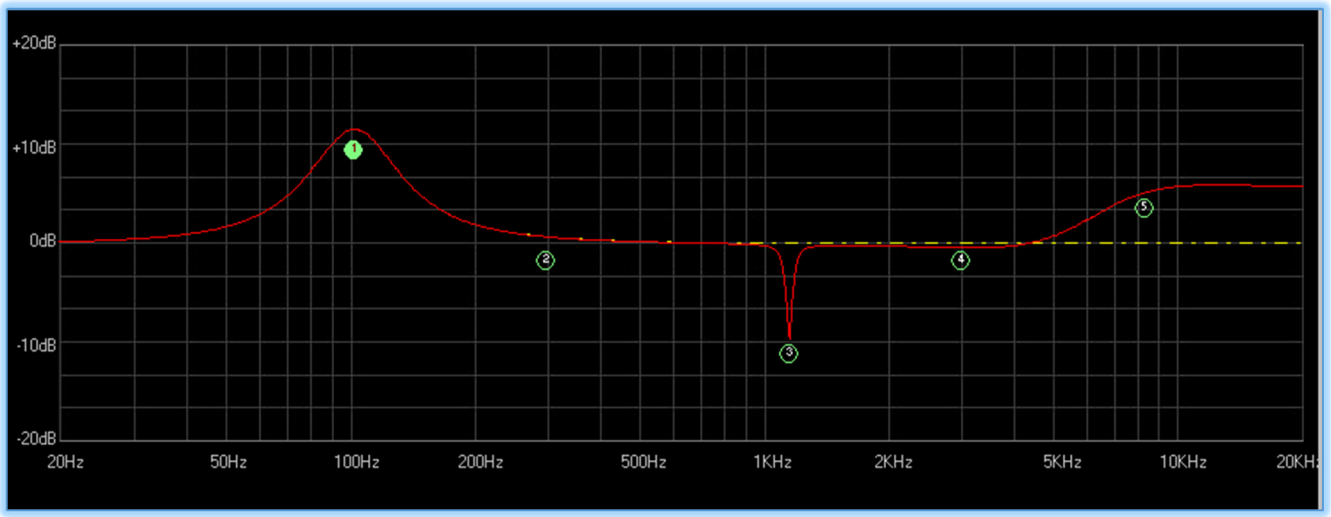


Finally the mute commands for all inputs and output are repeated on this page to mute or unmute channels are required when configuring a controller.

Input channel

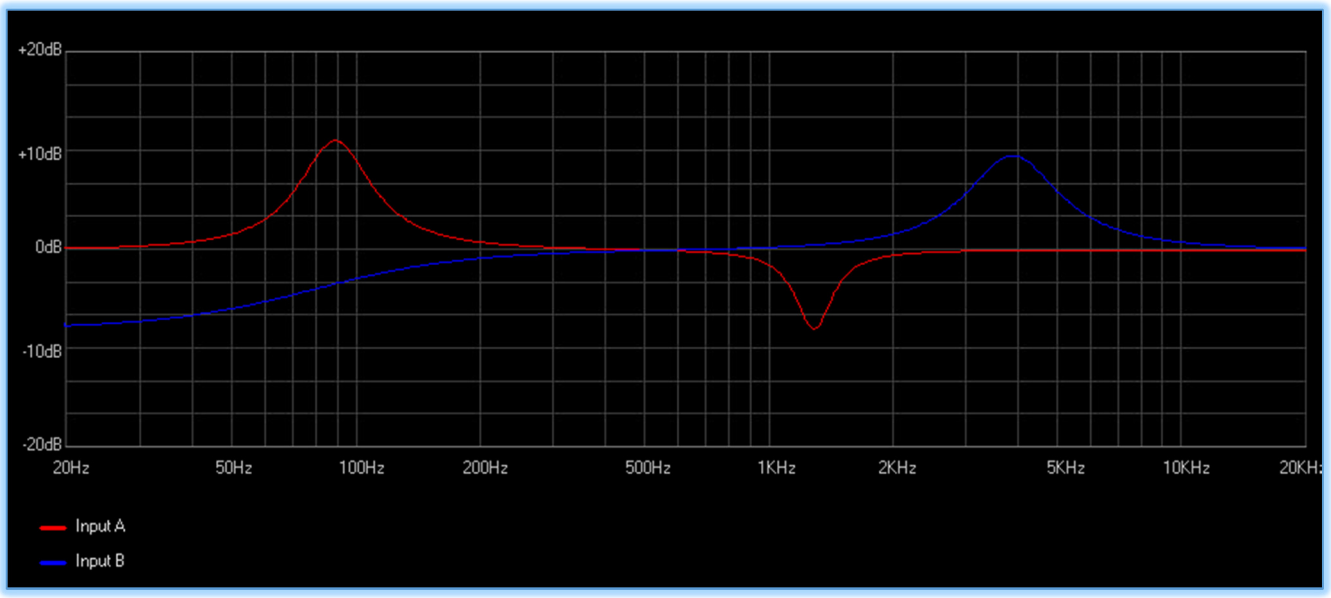


Both input channels have 5 bands of equalisation available which is configured in this window. The graph in the main section of the window shows a representation of the frequency response of the filtering applied with the red trace for channel A, blue for channel B. The position of the five filters is represented by the circled numbers with the one highlighted in green being the currently selected filter. The response for the selected filter is shown with a dashed yellow trace;-

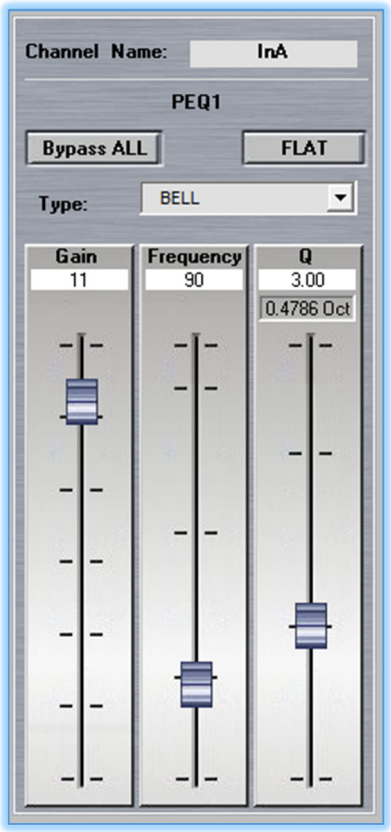


The section at the top of the page is where the filters to be adjusted can be selected;-

Filters 1 to 5 are shown on the left with a thumbnail of a PEQ filter, the selected filter will be highlighted in green. Over to the right are A and B buttons to select which of the two input channels are to be configured. EQ in inputs can be completely independent unless you have selected the input link function. Finally there is a 'Show All' button which will display both traces;-



To the right side of the window are the dedicated Property controls for the selected filter;-



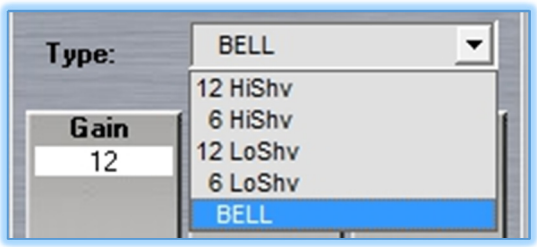
The channel that you have selected is shown at the top of this section;-

The specific filter selected from PEQ1 to 5 is shown just under this;-

Next are two buttons to bypass or reset all filters;-

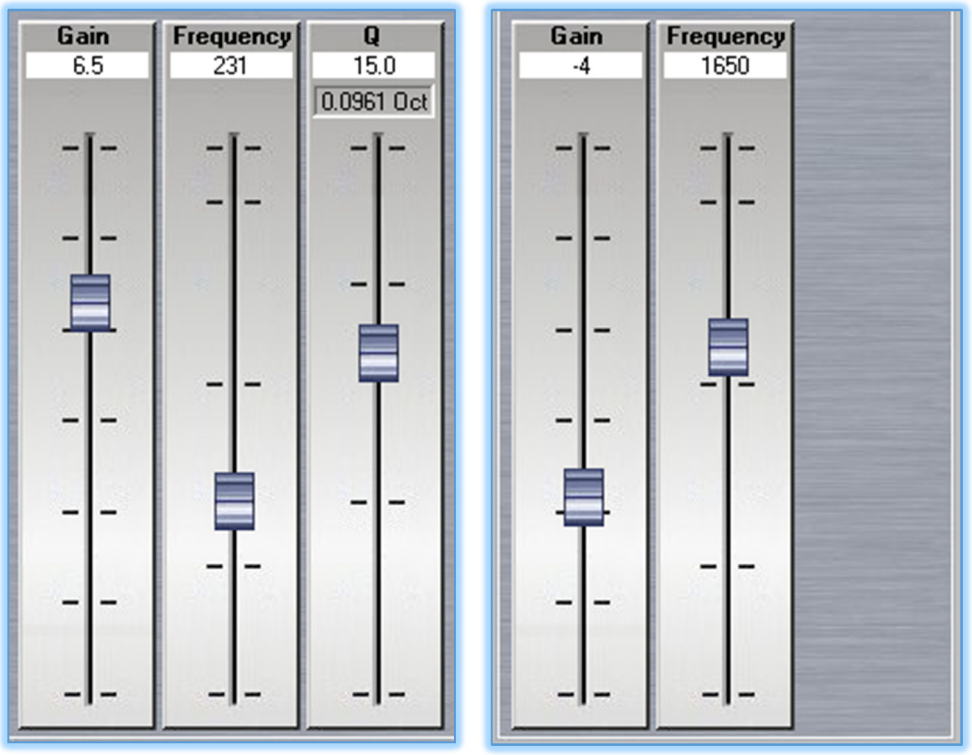
'Bypass ALL' will return the signal path to a flat response but retains the filter slopes you are created. A second click will put the EQ back in place. 'FLAT' as the name suggests resets the gain of all filters to 0dB. Frequency and Q factor values are retained but any gain settings are lost. Note that previous values cannot be restored unless you have stored your settings as a Preset, they will have to be manually re-entered.

The next features is the EQ type which offers a drop-down with the filter types available;-



All filters are Bell by default but may be configured as High Shelf with either a 6 or 12dB per octave slope, or Low Shelf, also with 6 or 12dB per octave slopes.

Finally there are three fader controls to adjust the parameters of each filter; Gain, Frequency and Quality factor, or if high or low shelf filters are selected Gain and Frequency;-



Each fader shows the precise numerical value corresponding to the fader position. The Quality factor has an additional value window showing the equivalent Bandwidth in octaves corresponding to the Q factor that has been set, this is useful for some third party speaker brands who specify their equalisation using bandwidth.

Adjusting filters

Filters can be adjusted in no less than four ways either from the graph screen or using the dedicated filter control. Gain is adjustable between +/- 15dB, frequency from 20Hz to 20kHz and Q from 0.4 to 128.

Click and Hold

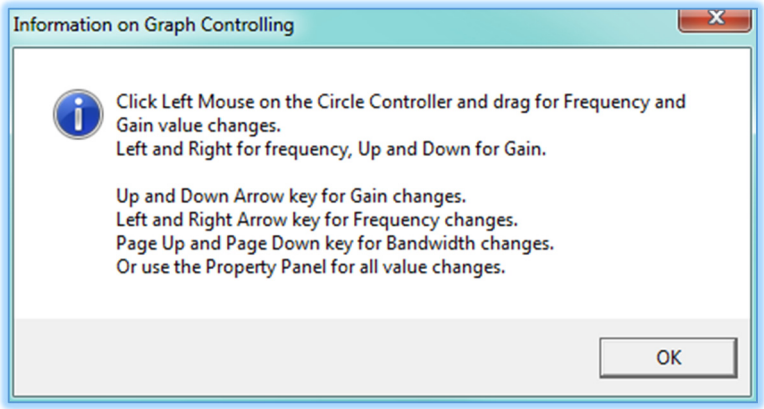
Click and hold on any of the Filter numbers in the graph. This will instantly select that filter it can then be dragged to any position on the graph adjusting the gain and frequency of that filter. The value will be updated in real time in the dedicated controls on the section on the right.

Keyboard Shortcuts

There are a number of keyboard shortcuts to make adjusting filters extremely easy once selected. The up and down buttons will control gain, the left and right will adjust frequency. Page up and down buttons will adjust the filter bandwidth.

All adjustments available in the graph are shown using a right click on the prompt at the bottom of the graph;-

Right clicking brings up the following window which explains the keyboard shortcuts available to control filters;-


Information on Graph Controlling
Click Left Mouse on the Circle Controller and drag for Frequency and Gain value changes.
Left and Right for frequency, Up and Down for Gain.
Up and Down Arrow key for Gain changes.
Left and Right Arrow key for Frequency changes.
Page Up and Page Down key for Bandwidth changes.
Or use the Property Panel for all value changes.
OK

Fader Adjustment

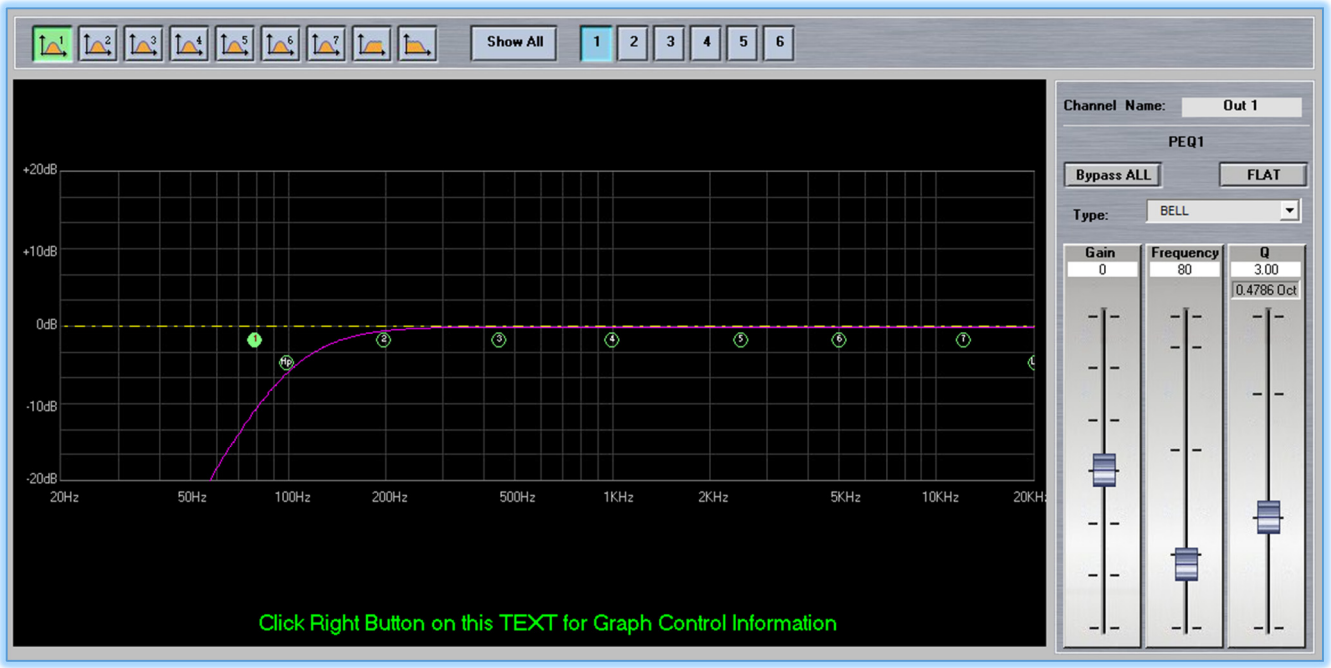
All filter parameter values can be adjusted by clicking and dragging the faders for either gain, frequency or Q. The value box at the top of each fader will update to show the exact value and the graph will update to show the frequently response.

Direct value

Precise values for gain, frequency and Q can be typed directly into the value box at the top of each fader. You must press the enter key when you have typed the value. Note that values for frequency have to be entered in full, the software does not recognise 'K' for values in thousands so for example if you need a value of 2.5kHz it is necessary to enter "2500".

Output Channel

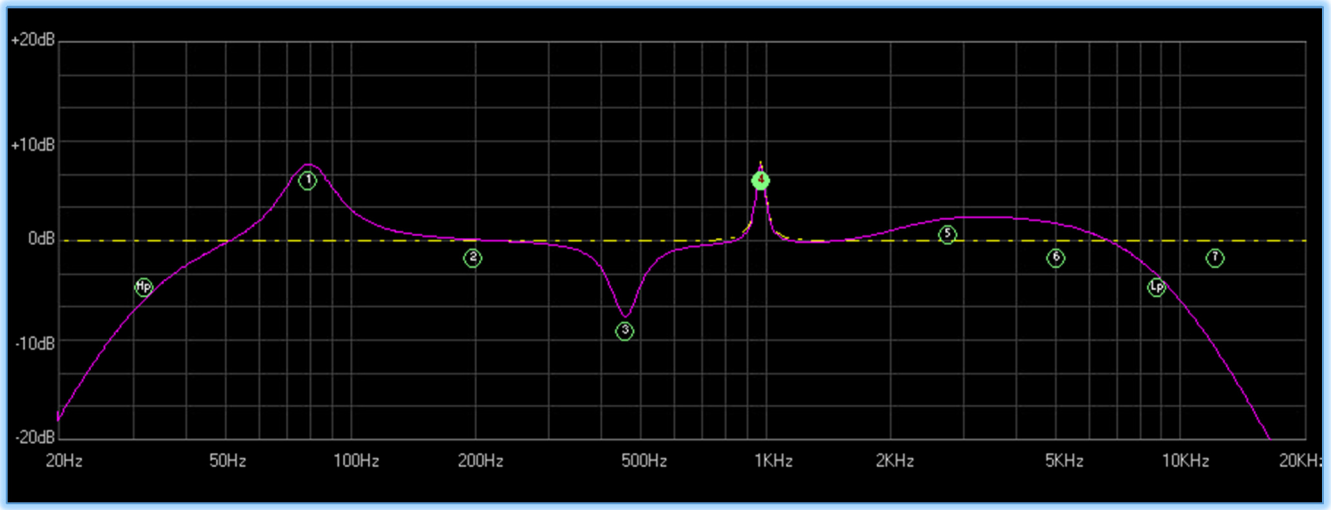
The output channel Tab opens the window where all equalisation for output channels is controlled, it is very similar to the input Window;-



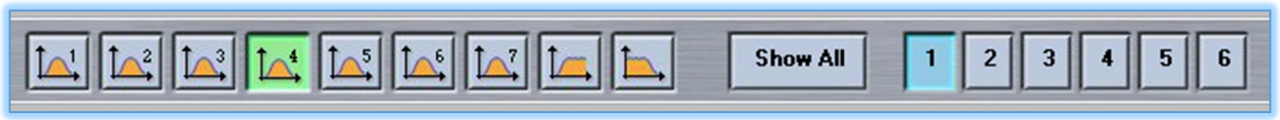
The graph as with the input window displays the frequency response for the output selected. These are colour coded so you can easily identify which output you are viewing. Colours are as follows;-

- Out 1 = Purple
- Out 2 = Pink
- Out 3 = Blue
- Out 4 = Green
- Out 5 = Brown
- Out 6 = Orange

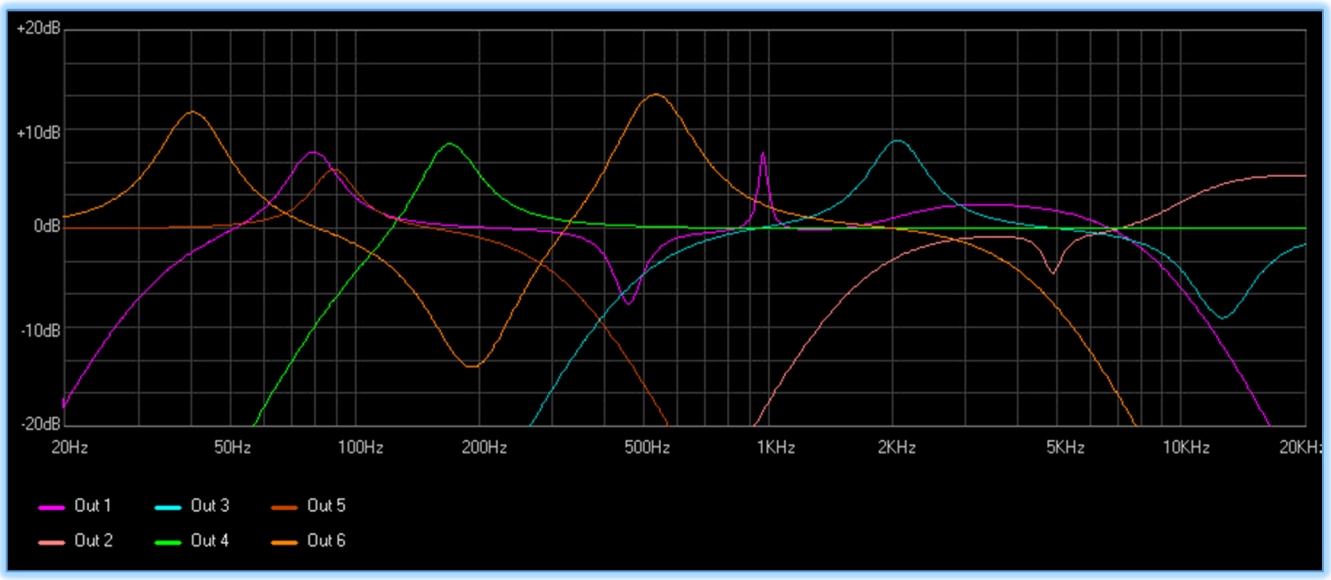
All output channels have seven bands of parametric equalisation available plus high and lowpass filters. These are shown in the graph as either their number from 1 to 7 or "LP" for low pass or "HP" for highpass enclosed in a circle. The currently selected filter will be highlighted green and that filters response shown with a dashed yellow trace;-



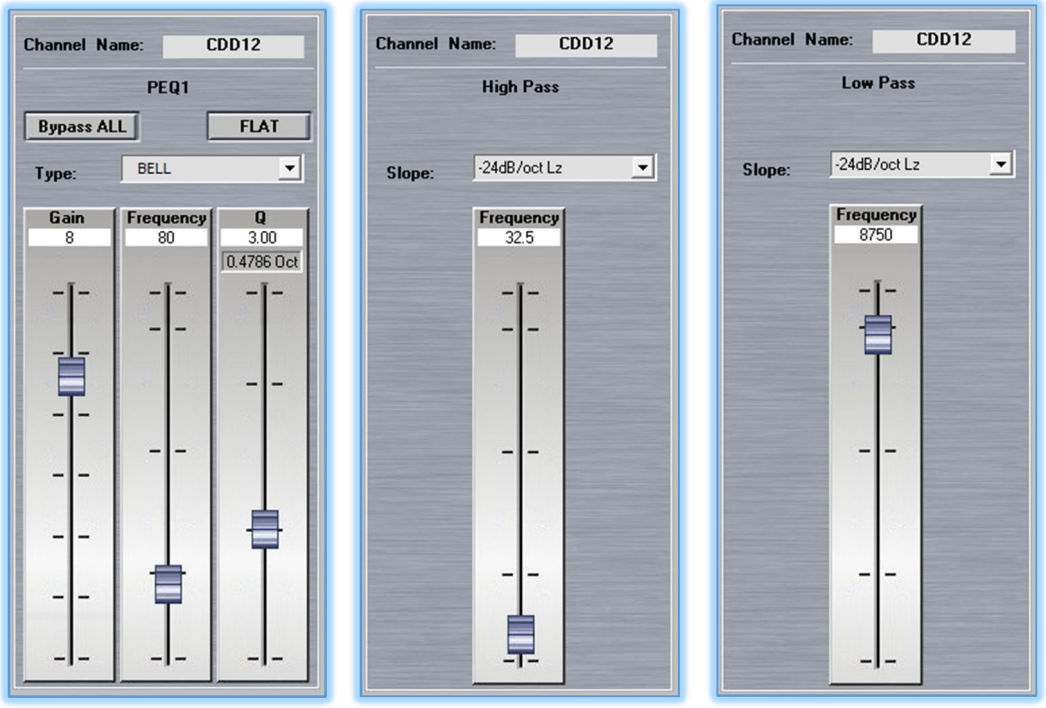
The top section of the window is where filters and outputs are selected;-



Parametric filters 1 to 7 are selected using the buttons on the left followed by the high pass and low pass filters. Over to the right are buttons 1 to 6 to select which of the output channels you are controlling. As with inputs, all outputs can be configured completely independently unless you have used the link function to link two or more channels together. The final button is the 'Show All' which displays the response of all six channels;-



To the right side of the window is the Property window which will look different depending on which filter or filter type is selected, the Parametric filters 1 to 7 appear very similar to the input EQ, High and low pass look slightly different, here we see all three;-



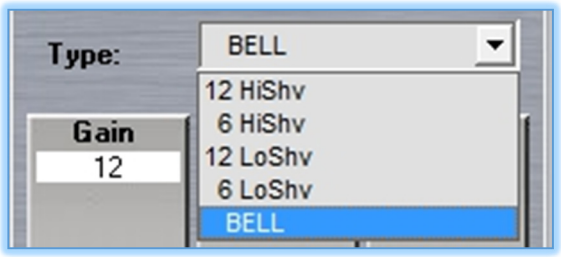
At the top of all types you will see the channel name, this will be the default "Out 1, out 2…." Unless you have edited the name in which case the new name will be displayed;-

Next the filter type is displayed, either PEQ (parametric) 1 to 7, Highpass or Low Pass;-

Next are two buttons to bypass or reset all filters;-

'Bypass ALL' will return the signal path to a flat response but retains the filter slopes you are created. A second click will put the EQ back in place. 'FLAT' as the name suggests resets the gain of all filters to 0dB. Frequency and Q factor values are retained but any gain settings are lost. Note that previous values cannot be restored unless you have stored your settings as a Preset, they will have to be manually re-entered.

The next features is the EQ type which offers a drop-down with the filter types available;-

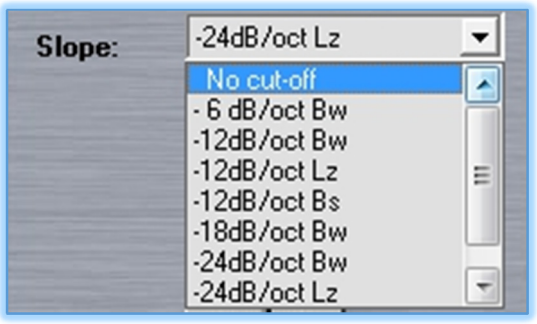


All filters are Bell by default but may be configured as High Shelf with either a 6 or 12dB per octave slope, or Low Shelf, also with 6 or 12dB per octave slopes.

For high and low pass filters the slope is available for selection from the flowing options;-

- No cut-off (bypassed)
- 6dB per octave Butterworth
- 12dB per octave Butterworth
- 12dB per octave Linkwitz Riley
- 12dB per octave Bessel
- 18dB per octave Butterworth
- 24dB per octave Butterworth

- 24dB per octave Linkwitz Riley
- 24dB per octave Bessel



Finally there are three fader controls to adjust the parameters of each filter; Gain, Frequency and Quality factor, or if high or low shelf filters are selected Gain and Frequency or just Frequency for High and low pass filters;-

Each fader shows the precise numerical value corresponding to the fader position. The Quality factor has an additional value window showing the equivalent Bandwidth in octaves corresponding to the Q factor that has been set, this is useful for some third party speaker brands who specify their equalisation using bandwidth.

Adjusting filters

Filters can be adjusted in no less than four ways either from the graph screen or using the dedicated filter control. Gain is adjustable between +/- 15dB, frequency from 20Hz to 20kHz and Q from 0.4 to 128.

Click and Hold

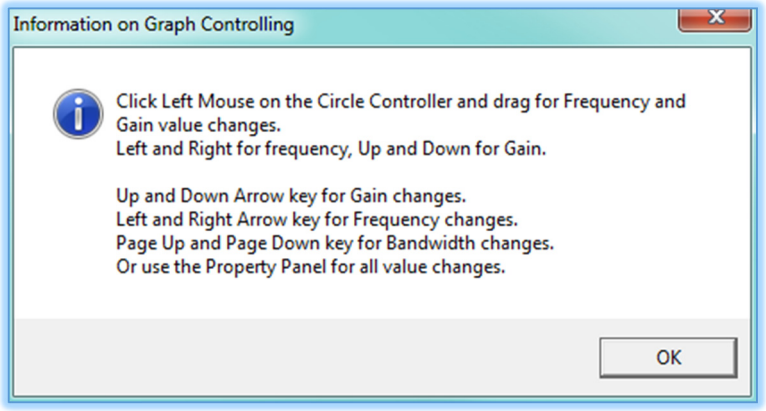
Click and hold on any of the Filter numbers in the graph. This will instantly select that filter it can then be dragged to any position on the graph adjusting the gain and frequency of that filter. The value will be updated in real time in the dedicated controls on the section on the right.

Keyboard Shortcuts

There are a number of keyboard shortcuts to make adjusting filters extremely easy once selected. The up and down buttons will control gain, the left and right will adjust frequency. Page up and down buttons will adjust the filter bandwidth.

All adjustments available in the graph are shown using a right click on the prompt at the bottom of the graph;-

Right clicking brings up the following window which explains the keyboard shortcuts available to control filters;-


Information on Graph Controlling
Click Left Mouse on the Circle Controller and drag for Frequency and Gain value changes.
Left and Right for frequency, Up and Down for Gain.
Up and Down Arrow key for Gain changes.
Left and Right Arrow key for Frequency changes.
Page Up and Page Down key for Bandwidth changes.
Or use the Property Panel for all value changes.
OK

Fader Adjustment

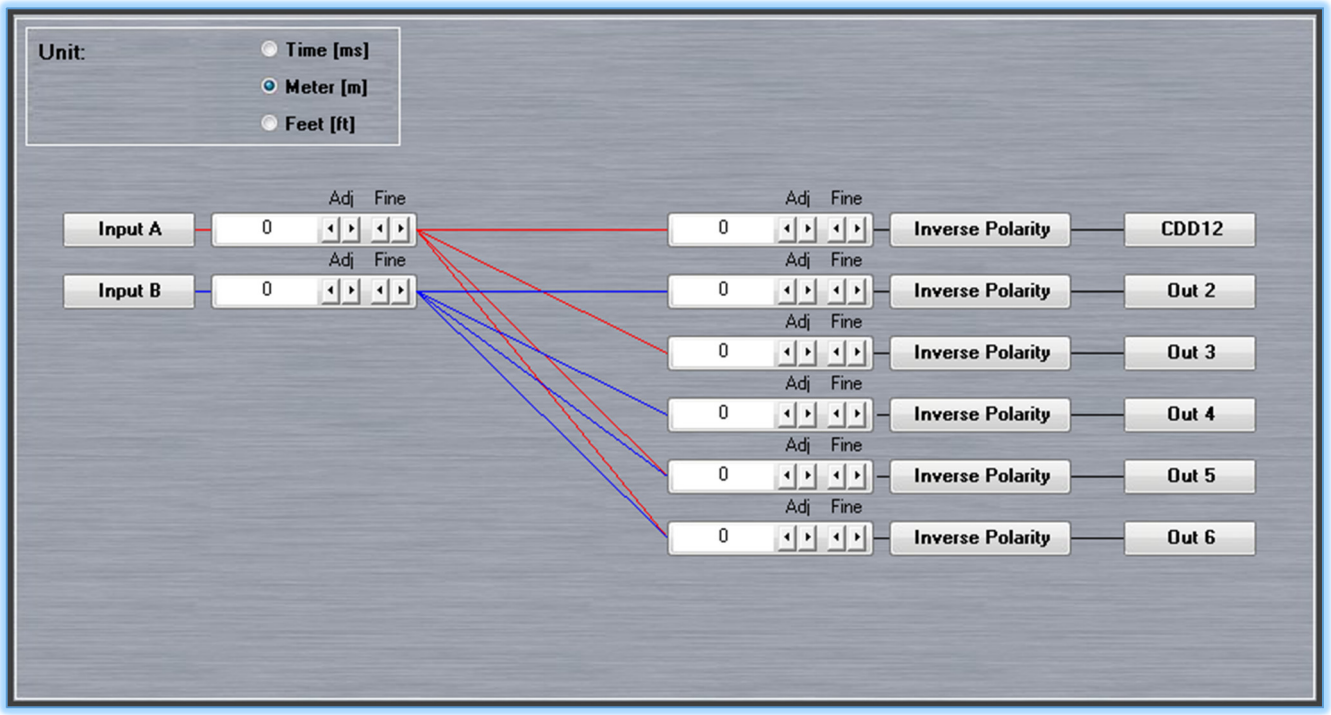
All filter parameter values can be adjusted by clicking and dragging the faders for either gain, frequency or Q. The value box at the top of each fader will update to show the exact value and the graph will update to show the frequently response.

Direct value

Precise values for gain, frequency and Q can be typed directly into the value box at the top of each fader. Note that values for frequency have to be entered in full, the software does not recognise 'K' for values in thousands so for example if you need a value of 2.5 kHz it is necessary to enter "2500". You must press the Enter Key for the application to accept a typed value.

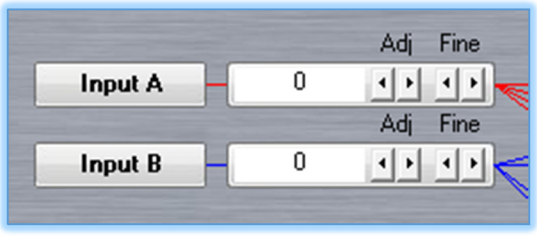
Delay

The final tab is delay which is where input and output delay can be added to time align either an entire system or components within a cabinet.

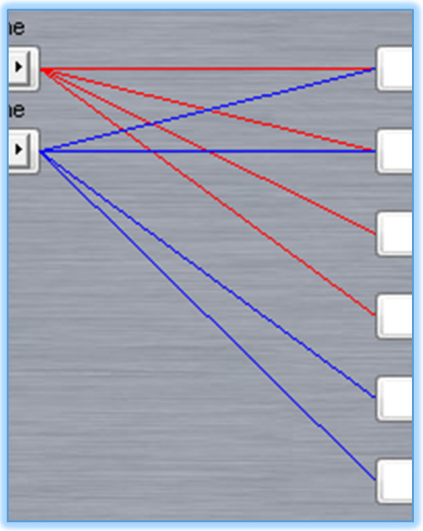


At the top of the window is a selection option for how the delay is specified, either by time in milliseconds, distance in meters or distance in feet for counties using imperial measurements;-

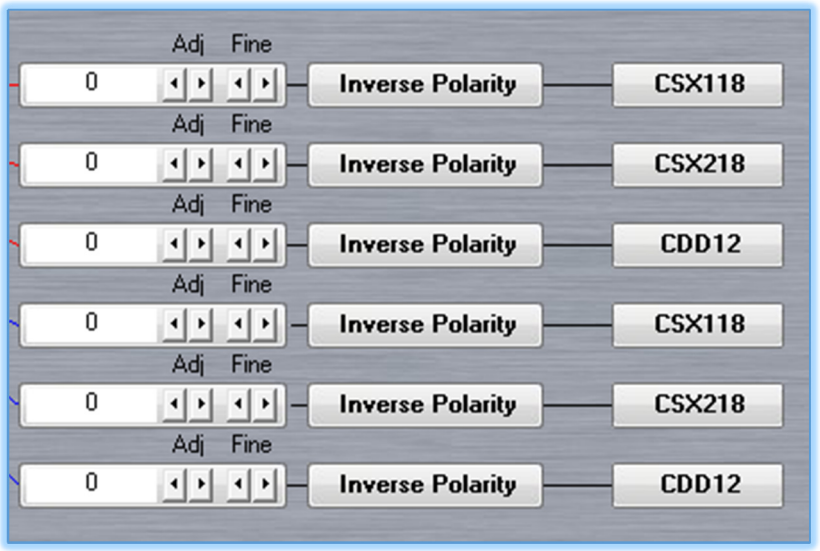
The diagram then shows inputs A and B with delay adjustment available for both channels independently (unless they have been linked);-



Routing is shown with red (for channel A) and blue (for channel B) lines going from their respective input channels directly to the output channels to which they have been routed;-



Finally the output channels are shown with individually adjustable delay for each channel plus polarity adjustment;-



Delay Adjustment

Delay is adjusted for input and output channels in exactly the same way using the adjustment buttons either left to decrease delay or right to increase. Delay is adjustable from zero to a maximum of 600ms / 204 metres / 669 feet. There are course and fine adjustment buttons available. The course adjustment increases or decreases in increments of 1ms / 0.34 metres / 1.114 feet. Fine adjustments increases or decreases delay in increments of 0.0206ms / 0.006 metres / 0.022 feet. Precise values can also be directly typed into the value box followed by the Enter key.

Inverse Polarity

Clicking the Inverse polarity button inverts the output channel adding a 180°pase shift

The output channel names are also displayed and clicking on any of these is another option to open the name editing window.

Technical Specifications

INPUTS	2 electronically balanced analogue
CMRR	>58dB
OUTPUTS	6 electronically balanced analogue
MAX OUTPUT	+21dBu
FREQUENCY RESPONSE	20Hz-20kHz ± 0.2dB
DYNAMIC. RANGE	120dB
DISTORTION	< .004% 20Hz-20kHz
MAXIMUM DELAY	>600 ms
MIN STEP SIZE	20 µS
INPUT GAIN	± 15dB in 0.1dB steps
OUTPUT GAIN	+6dB to -12dB in 0.1dB steps plus mute
PARAMETRIC EQUALISATION	
FILTERS	5 per input / 7 per output
FILTER GAIN	±15dB in 0.05dB steps
FREQUENCY RANGE	20Hz - 20kHz, 1/24 octave steps
FILTER BW	3 to 0.05 in 0.05 steps
HIGH AND LOWPASS FILTERS	
FREQUENCY RANGE	20Hz - 20kHz
RESPONSES	
BUTTERWORTH	6dB, 12dB, 18dB, 24dB / Octave
LINKWITZ-RILEY	12dB, 24dB / Octave
BESSEL	12dB, 24dB / Octave
LIMITERS	
THRESHOLD	+20dBu to -10dBu
ATTACK TIME	5ms to 200ms
RELEASE TIME	0.1 – 3.0s ±0.1s increments
DISPLAY	2 x 24 character blue LCD
INPUT METER	2 x 7 point, -20dB to +15dB
OUTPUT METER	6 x 7 point, -15dB to +15dB into limit
CONNECTORS	
INPUTS	3 pin female XLR
OUTPUTS	3 pin male XLR
EXTERNAL	USB TYPE-B (USB1.1)
	Program via Windows-based PC
	Download app and driver from:
	www.martin-audio.com/software/software
POWER	3 pin IEC POWER 100 to 240V @ 50/60Hz
CONSUMPTION:	40 watts
DIMENSIONS	(W) 482mm x (H) 44mm x (D) 229mm
	(W) 19ins x (H) 1.75ins (1U) x (D) 9ins
WEIGHT	2.6kg (5.8lbs)

Warranty

Martin Audio DX1.5 Loudspeaker Management Systems are warranted against manufacturing defects in materials or craftsmanship over a period of 1 year from the date of original purchase.

During the warranty period Martin Audio will, at its discretion, either repair or replace products which prove to be defective provided that the product is returned in its original packaging, shipping prepaid, to an authorised Martin Audio service agent or distributor.

Martin Audio Ltd. cannot be held responsible for defects caused by unauthorised modifications, improper use, negligence, exposure to inclement weather conditions, act of God or accident, or any use of this product that is not in accordance with the instructions provided by Martin Audio. Martin Audio is not liable for consequential damages.

This warranty is exclusive and no other warranty is expressed or implied. This warranty does not affect your statutory rights.

Technical Drawing